



توجه

در صورت غیر فعال بودن دکمه‌ها در سیستم عامل اندروید،
حتما اپلیکیشن GoogleDrive خود را به روزرسانی نمایید.

If the buttons are disabled in the Android system,
Be sure to update your Google Drive app.

زبان مورد نظرتان را انتخاب نمایید:

Select **your language**:

فارسی

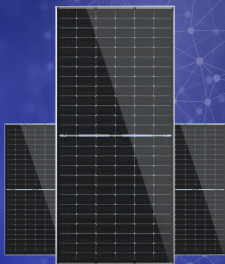


English



شروع

شروع



درباره ما



محصولات



تماس با ما



شرکت پیشگامان انرژی نوراتک با تکیه بر سرمایه انسانی متخصص و همراهی اساتید برجسته دانشگاه های مطرح کشور، مرجع تخصصی تامین و ارائه تجهیزات و محصولات انرژی خورشیدی در کشور میباشد .

نوراتک با طراحی، مشاوره و اجرای بیش از ۳۸ مگاوات پروژه نیروگاهی خورشیدی همچنین تامین و توزیع بیش از ۲۹۰ مگاوات پنل خورشیدی و ۲۱۰ مگاوات اینورتر از برندهای معتبر جهانی، در زمره بزرگترین تامین کنندگان تجهیزات انرژی خورشیدی کشور قرار داشته و برای صنایع مختلف، کسب و کارهای متعدد، مجتمع ها و منازل مسکونی و اداری ، ویلاها و ...، راهکارهای اختصاصی با بازده بالا ارائه می نماید.

- طراحی، مشاوره و اجرای نیروگاه های خورشیدی (EPC)
- تامین انواع پنل، اینورتر، استراکچر و باتری لیتیومی (LFP)
- طراحی و اجرای سیستم های Hybrid , Off Grid, On Grid

خلاصه عملکرد سال اخیر:



۳۸ MW

حجم پروژه های
نیروگاهی فتوولتائیک



۲۱۰ MW

حجم تامین و فروش
انواع اینورتر



۲۹۰ MW

حجم تامین و فروش
انواع پنل خورشیدی

اعضای مجموعه نوراتک



بازگشت

جوایز و گواهینامه ها

همکاران استراتژیک و مشتریان ویژه



شرکت نوراتک در مسیر تحقق اهداف خود در حوزه انرژی، فناوری و توسعه زیرساخت‌های پایدار، افتخار همکاری با مجموعه‌ای از معتبرترین سازمان‌ها و شرکت‌های کشور را دارد. همکاری‌های راهبردی با نهادهایی همچون ساتبا (سازمان انرژی‌های تجدیدپذیر و بهره‌وری انرژی برق)، ساتکا (انجمن سازندگان و تامین‌کنندگان کالا و خدمات انرژی‌های تجدیدپذیر) و نیز شرکت لجستیک گلدیران، نقش مهمی در ارتقای کیفیت خدمات، گسترش شبکه تأمین و تسریع در اجرای پروژه‌ها ایفا کرده است. نوراتک این تعاملات را سرمایه‌ای ارزشمند دانسته و مبتنی بر کسب و کار منصفانه، اعتماد متقابل، مسئولیت‌پذیری و خلق ارزش مشترک، توسعه این روابط را دنبال می‌کند.



مدیرعامل: حسام کازری

دکترای مهندسی برق قدرت، دانشگاه صنعتی شریف

عضو هیئت علمی دانشگاه علم و صنعت ایران

پژوهشگر مدعو در دانشگاه Imperial college london

موسس، سهامدار و مشاور ۳ شرکت دانش بنیان (در صنعت برق و انرژی)

رئیس هیئت مدیره: حامد نجفی

دکترای اقتصاد، دانشگاه علامه طباطبایی

مدرس دانشکده مدیریت دانشگاه تهران

موسس، مدیرعامل و سهامدار شرکت مینا

مالک و مجری ۱۴ مگا وات نیروگاه خورشیدی در منطقه ویژه اقتصادی پیام

نایب رئیس هیئت مدیره: عباس خالقی تبار

دکترای حرفه ای مدیریت بازرگانی، دانشگاه تهران

مدیر کل برنامه ریزی سازمان توسعه تجارت ایران

مدیرعامل مرکز آموزش بازرگانی

رئیس دانشگاه علمی کاربردی بازرگانی

مدیر گروه دوره DBA مدیریت بازرگانی دانشگاه تهران



بازگشت

عضو هیئت مدیره: فاطمه سید صالحی

دکترای هوش مصنوعی، دانشگاه صنعتی شریف

پژوهشگر مدعو دانشگاه UC Berkeley

عضو هیئت علمی دانشگاه شریف

مشاور همراه اول در حوزه هوش مصنوعی

مشاور بانک رفاه در حوزه هوش مصنوعی

مدیر فروش: محمد محمدی قهرودی

کارشناس ارشد مهندسی انرژی تجدید پذیر

بیش از ۱۵ سال سابقه در حوزه نیروگاههای خورشیدی

طراح بیش از ۸۰۰ مگا وات نیروگاه خورشیدی

عضو کمیته تدوین آیین نامه فتوولتائیک ایران

سایر همکاران شرکت :

همکاری با بیش از ۲۳ نفر از مدیران و کارشناسان حرفه ای در حوزه مشاوره، طراحی، تامین، فروش، نصب، راه اندازی و خدمات پس از فروش در کل زنجیره محصولات و تجهیزات خورشیدی



بازگشت

محصول مورد نظر را انتخاب کنید



باتری LFP



اینورتر



پنل خورشیدی



اکسسوری



کابل



حسگر سنجش کارایی

به زودی...



پست کمپکت



استراچر



بازگشت

تماس با پشتیبانی





پنل خورشیدی

برند مورد نظر را انتخاب کنید

JinKO Solar ▶

Trinasolar ▶



بازگشت

تماس با پشتیبانی



JinKO Solar

سری مورد نظر را انتخاب کنید

نیروگاهی / ۷۰۰⁺ W



صنعتی / ۶۰۰⁺ W



خانگی / ۴۰۰⁺ W



بازگشت

تماس با پشتیبانی



Tiger Bifacial 450-470 Watt

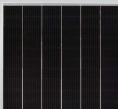
Tiling Ribbon (TR) Technology

Positive power tolerance of 0~+3%

ISO9001:2015, ISO14001:2015, ISO45001:2018
certified factory

IEC61215, IEC61730 certified product

N-Type



KEY FEATURES



TR technology + Half Cell

TR technology with Half cell aims to eliminate the cell gap to increase module efficiency (mono-facial up to 20.65%)



Low Light Induced Degradation

The N-type cell shows extremely low light induced degradation (LID) performance when comparing with the P-type cell.



9BB instead of 5BB

9BB technology decreases the distance between bus bars and finger grid line which is benefit to power increase.



Higher lifetime Power Yield

1% first year degradation,
0.4% linear degradation



Best Warranty

15 year product warranty,
30 year linear power warranty



Better low-light performance

Excellent performance in low-light environments
(e.g. early morning, dusk, and cloud, etc.)

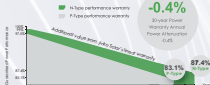


Severe Weather Resilience

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

LINEAR PERFORMANCE WARRANTY

15 Year Product Warranty 30 Year Linear Power Warranty
0.4% Annual Degradation Over 30 years

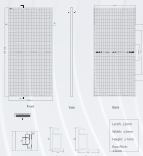


بازگشت

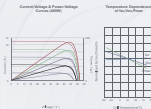
ادامه اطلاعات فنی

Jinko Solar

Engineering Drawings



Electrical Performance & Temperature Dependence



Packaging Configuration

(Two panels = One stack)

800kg/pallets, 800kg/stack, 6000pc/ 40HQ Container

Mechanical Characteristics

Cell Type	N type Mono-crystalline
Number of cells	196 (2x7x7)
Dimensions	2205x1052x25mm (86.81x41.41x1.00 inch)
Weight front	25.0 kg (55.12 lbs)
Glass	3.2mm Anti-Reflection Coating, High Transmittance, Low Iron, Tempered Glass
Frame	Robust Anodized Almg
Junction Box	IP67 Rated
Diagonal Cable	3.0/3.1 (1.18/1.22 inch)
Cables	(+) 2500mm, (-) 1500mm or Customized Length

SPECIFICATIONS

Module Type	JKM60N-TRL3-TV		JKM60N-TRL3-TV		JKM60N-TRL3-TV		JKM60N-TRL3-TV	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	430Wp	320Wp	430Wp	320Wp	430Wp	320Wp	430Wp	320Wp
Maximum Power Voltage (Vmp)	43.60V	40.02V	43.60V	40.10V	43.60V	40.20V	43.60V	40.47V
Maximum Power Current (Imp)	10.35A	8.28A	10.35A	8.05A	10.35A	8.05A	10.35A	8.05A
Open-circuit Voltage (Voc)	51.70V	48.80V	51.80V	48.80V	51.80V	48.90V	52.00V	49.10V
Short-circuit Current (Isc)	11.01A	8.96A	11.10A	9.01A	11.20A	9.06A	11.30A	9.23A
Module Efficiency STC (%)	19.76%	20.00%	20.21%		20.42%		20.48%	
Operating Temperature(°C)	-40°C~+85°C							
Maximum system voltage	1000V DC (60C)							
Maximum series fuse rating	25A							
Power tolerance	0~+3%							
Temperature coefficient of Pmax	-0.34%/°C							
Temperature coefficient of Voc	-0.29%/°C							
Temperature coefficient of Isc	0.048%/°C							
Nominal operating cell temperature (NOCT)	45±2°C							
Refer Bifacial Factor	80±5%							

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

	470Wp	470Wp	470Wp	470Wp	470Wp
9%	Maximum Power (Pmax)	470Wp	470Wp	470Wp	470Wp
	Module Efficiency STC (%)	20.76%	20.88%	21.22%	21.66%
19%	Maximum Power (Pmax)	518Wp	523Wp	529Wp	536Wp
	Module Efficiency STC (%)	22.14%	22.88%	23.28%	23.75%
30%	Maximum Power (Pmax)	565Wp	572Wp	580Wp	589Wp
	Module Efficiency STC (%)	24.71%	25.88%	26.28%	26.95%

* STC: Irradiance 1000W/m² Cell Temperature 25°C

NOCT: Irradiance 800W/m² Ambient Temperature 20°C

Power measurement tolerance: ± 3%

AM 1.5

AM 1.5

Wind Speed 1m/s

The company reserves the final right for explanation on any of the information presented hereby. TR-JKM60-470N-TRL3-TV-A1-1-G1



بازگشت

تماس با پشتیبانی



Jinko Solar TIGER Neo



66HL4M-BDV

605-630 Watt

BIFACIAL MODULE WITH DUAL GLASS

N-type



N-Type Technology

N-Type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LetID degradation and better low light performance.



HOT 3.0 Technology

N-type modules with JinkoSolar's HOT 3.0 technology offer better reliability and efficiency.



Dual-Sided Power Generation

Dual-sided power generation gain increases with backside exposure to light, significantly reducing LCOE.



Mechanical Load Enhanced

Certified to withstand:
5400 Pa front side max static test load
2400 Pa rear side max static test load



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



Anti-PID Guarantee

Minimizes the chance of degradation caused by PID phenomena through optimization of cell production technology and material control.

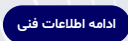


12 Year | 30 Year | 1% | 0.40%

- IEC61215:2021 / IEC61730:2023
- IEC61731 / IEC62716 / IEC60868 / IEC62884
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



JKM605-630N-66HL4M-BDV-F3-EN



Mechanical Characteristics

Cell Type	N-type Mono-crystalline
No. of cells	132 (6x22)
Dimensions	2392 × 1134 × 30 mm
Weight	32.4 kg
Front Glass	2.8 mm, Anti-reflection Coating
Back Glass	2.8 mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Protection Class	Class II
IEC Fire Type	Class C
Connector Type	M03M/MC4/Others
Output Cables	4.0 mm ² (+) 490 mm, (-) 208 mm or Customized Length

Packaging Configuration

Pallet Dimensions	2396 × 1118 × 1253 mm
Packing Detail	36 pcs/pallets, 12 pcs/stack, 720 pcs/40'HQ Container

Specifications (STC)

Maximum Power - P _{max} [Wp]	665	610	615	628	625	630
Maximum Power Voltage - V _{mp} [V]	48.31	48.46	48.60	48.74	48.83	48.92
Maximum Power Current - I _{mp} [A]	15.81	15.08	15.15	15.22	15.29	15.36
Open-circuit Voltage - V _{oc} [V]	48.48	48.68	48.88	49.08	49.28	49.48
Short-circuit Current - I _{sc} [A]	15.90	15.96	16.02	16.08	16.14	16.20
Module Efficiency STC (%)	22.40	22.58	22.77	22.95	23.14	23.32
Power Tolerance	0 ~ +3%					
Temperature Coefficients of P _{max}	-0.29 %/°C					
Temperature Coefficients of V _{oc}	-0.25 %/°C					
Temperature Coefficients of I _{sc}	0.045 %/°C					

STC Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5

Specifications (BNP)

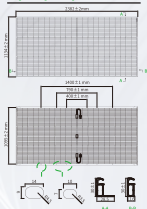
Maximum Power - P _{max} [Wp]	668	674	679	685	690	696
Maximum Power Voltage - V _{mp} [V]	48.29	48.46	48.59	48.75	48.88	49.04
Maximum Power Current - I _{mp} [A]	16.58	16.95	16.73	16.81	16.83	16.95
Open-circuit Voltage - V _{oc} [V]	48.46	48.66	48.86	49.06	49.26	49.46
Short-circuit Current - I _{sc} [A]	17.56	17.64	17.70	17.77	17.83	17.90

BNP Irradiance from 1000W/m², near 1200W/m², Cell Temperature 25°C, AM=1.5

Application Conditions

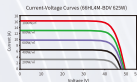
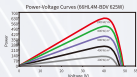
Operating Temperature	-40 °C ~ +70 °C
Maximum System Voltage	1500 VDC (IEC)
Maximum Series Fuse Rating	35 A
Bifaciality Coefficient	q _{Voc} : 58 ± 3 %, q _{Isc} : 68 ± 3 %, q _{Pmax} : 80 ± 3 %

Engineering Drawings



Note: For specific dimensions and tolerances, please refer to the corresponding detailed module drawings.

Electrical Performance



بازگشت

تماس با پشتیبانی



Jinko Solar TIGER Neo



66HL5-BDV

710-735 Watt

BIFACIAL MODULE WITH DUAL GLASS

N-type



N-type Technology

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LeTID degradation and better low light performance.



HOT 3.0 Technology

N-type modules with JinkoSolar's HOT 3.0 technology offer better reliability and efficiency.



Dual-Sided Power Generation

Dual-sided power generation gain increases with backside exposure to light, significantly reducing LCOE.



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



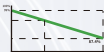
Mechanical Load Enhanced

Certified to withstand:
5400 Pa front side max static test load
2400 Pa rear side max static test load



Anti-PID Guarantee

Minimizes the chance of degradation caused by PID phenomena through optimization of cell production technology and material control.



12 Year Powermax | 30 Year Lifetime | 1% Degradation | 0.40% Power Loss

- IEC61215-2022 / IEC61730-2025
- IEC61701 / IEC62136 / ISO8068 / IEC62894
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



JKM710-735N-66HL5-BDV-Z3-EN



بازگشت

ادامه اطلاعات فنی

Mechanical Characteristics

Cell Type	Pi-type Mono-crystalline
No. of cells	132 (66×2)
Dimensions	2384 × 1303 × 33 mm
Weight	22.5 kg
Front Glass	2.0 mm, Anti-Reflection Coating
Back Glass	2.0 mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Protection Class	Class II
IEC Fire Type	Class C
Connector Type	JKB3M/JKB3M2/Others*
Output Cables (Including Connector)	4.0 mm ² [H]-400 mm, [L]-200 mm or Customized Length

*MC4 and MC4-EVO2 available upon request and subject to availability.

Packaging Configuration

Pallet Dimensions	1325 × 1123 × 2496 mm
Packing Detail	33 pcs/pallets, 994 pcs/40 HQ Container
(Two pallets = One stack)	

Specifications (STC)

	T30	T35	T20	T25	T30	T35
Maximum Power - P _{max} [Wp]	170	175	220	225	230	235
Maximum Power Voltage - V _{mp} [V]	48.65	48.77	49.89	49.08	49.11	49.23
Maximum Power Current - I _{mp} [A]	3.47	3.54	37.61	17.69	17.76	17.83
Open-circuit Voltage - Voc [V]	48.73	48.88	49.04	49.20	49.36	49.52
Short-circuit Current - Isc [A]	38.53	38.60	39.67	18.74	18.81	18.88
Module Efficiency STC [%]	22.86	23.82	23.18	23.34	23.50	23.66
Power Tolerance	0 ~ +3%					
Temperature Coefficient of P _{max}	-0.23%/°C					
Temperature Coefficient of Voc	-0.25%/°C					
Temperature Coefficient of Isc	0.045%/°C					

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM-1.5

Specifications (BNPI)

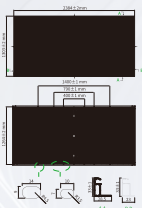
	T34	T30	T35	800	805	810
Maximum Power - P _{max} [Wp]	40.68	40.80	43.82	41.03	41.14	41.25
Maximum Power Voltage - V _{mp} [V]	19.28	19.36	19.43	19.50	19.57	19.64
Maximum Power Current - I _{mp} [A]	48.73	48.85	48.99	49.12	49.25	49.38
Open-circuit Voltage - Voc [V]	20.48	20.55	20.63	20.71	20.79	20.87
Short-circuit Current - Isc [A]						

BNPI: Irradiance: front 200W/m², rear 120W/m², Cell Temperature 25°C, AM-1.5

Application Conditions

Operating Temperature	-40°C ~ +70°C
Maximum System Voltage	1500 VDC (IEC)
Maximum Series Fuse Rating	35 A
Bifaciality Coefficients	α _{front} 90±5%, α _{back} 80±5%, α _{Pmax} 80±5%

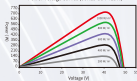
Engineering Drawings



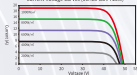
*Note: For specific dimension and tolerance ranges, please refer to the corresponding detailed module drawing.

Electrical Performance

Power-Voltage Curves (66HL5-BDV T35W)



Current-Voltage Curves (80HL5-BDV T25W)



بازگشت

تماس با پشتیبانی





Trinasolar

سری مورد نظر را انتخاب کنید

نیروگاهی / ۷۰۰⁺ W



صنعتی / ۶۰۰⁺ W



خانگی / ۴۰۰⁺ W



بازگشت

تماس با پشتیبانی



Vertex S+

DUAL GLASS N type i-TOPCon MODULE

PRODUCT: TSM-NEG9R-28

POWER RANGE: 425-450 W

450 W

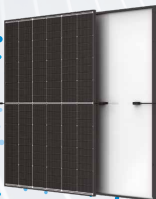
MAXIMUM POWER OUTPUT

0/+5 W

POSITIVE POWER TOLERANCE

22.5%

MAXIMUM EFFICIENCY



Small in size, bigger on power

- Generates up to 450 W, 22.5 % module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping, lower series resistance, improved current collection and enhanced reliability
- Reduces installation cost with higher power bin and efficiency



Dual-glass Design, High Reliability

- Excellent fire rating and resistance to harsh environmental conditions
- 5,400 Pa snow load and 4,000 Pa wind load (test loads)



Maximize Energy Harvest

- Up to 25 years product warranty and 30 years power warranty
- 1 % first-year degradation and 0.4 % annual degradation enabled by N-type technology



Universal solution for residential and C&I rooftops

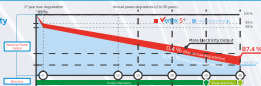
- Designed for compatibility with existing mainstream inverters, optimizers and mounting systems
- Perfect size and low weight for easy handling, optimized transportation cost
- Flexible installation solutions for system deployment

Extended Vertex S+ Warranty

1 %
3rd year max degradation

0,4 %
Max. annual degradation from year 2 to 30

25 Years
Product Workload up warranty

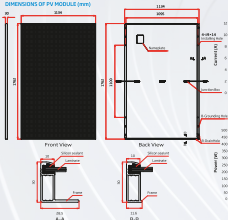


بازگشت

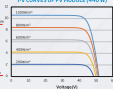
ادامه اطلاعات فنی

Vertex S⁺

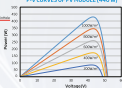
DIMENSIONS OF PV MODULE (mm)



I-V CURVES OF PV MODULE (440 W)



P-V CURVES OF PV MODULE (440 W)



ELECTRICAL DATA (STC)

	TSM-425 60/36/2.0	TSM-430 60/36/2.0	TSM-435 60/36/2.0	TSM-440 60/36/2.0	TSM-445 60/36/2.0	TSM-450 60/36/2.0
Peak Power (Watt/Proc (P _{MP})*	425	430	435	440	445	450
Power Tolerance (Proc (P))	±0.5					
Maximum Power Voltage (V _{MPP})	42.9	43.2	43.5	44.8	44.3	44.6
Maximum Power Current (I _{MPP})	9.92	9.96	9.99	10.01	10.00	10.00
Open-Circuit Voltage (V _{OC})	52.9	53.4	53.8	52.2	52.8	52.9
Short-Circuit Current (I _{SC})	10.96	10.99	10.94	10.67	10.71	10.74
Module Efficiency - m (%)	21.3	21.5	21.8	22.0	22.3	22.5

STC: irradiance 1000W/m², cell temperature 25°C, air mass 1.5, reference spectrum AM1.5G

ELECTRICAL DATA (NOCT)

	TSM-425 60/36/2.0	TSM-430 60/36/2.0	TSM-435 60/36/2.0	TSM-440 60/36/2.0	TSM-445 60/36/2.0	TSM-450 60/36/2.0
Maximum Power (Proc (P))	329	328	332	335	330	333
Maximum Power Voltage (V _{MPP})	40.0	40.4	40.7	41.0	41.3	41.8
Maximum Power Current (I _{MPP})	8.20	8.11	8.15	8.17	8.20	8.24
Open-Circuit Voltage (V _{OC})	48.2	48.7	48.1	49.4	48.8	48.1
Short-Circuit Current (I _{SC})	8.51	8.53	8.57	8.60	8.63	8.65

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	244 cells
Module Dimensions	1760*1134*30mm
Weight	21.0kg
Front Glass	3.0mm, High Transmittance, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Back Glass	1.6mm, Heat Strengthened Glass
Frame	30mm-Anodized Aluminum Alloy, Black
J-Box	IP67-rated
COE/CL	Photovoltaic Technology COE/CL 4.0 mm ² Lifespan: 1100/1100 hrs Power: 280/300 mm ²
Connector	TSM-1/64 IP67*

*See instruction

TEMPERATURE RATINGS

NOCT (temperature of maximum)	45°C (cell T)
Temperature Coefficient of P _{mp}	-0.30 %/K
Temperature Coefficient of I _{sc}	-0.24 %/K
Temperature Coefficient of V _{oc}	0.04 %/K

MAXIMUM RATINGS

Operational Temperature	-40 to +85 °C
Maximum System Voltage	1500VDC (IEC)
Max. Series Fuse Rating	20A

WARRANTY

25 Year Product Workmanship Warranty
10 Year Power Warranty
1% first year degradation
0.4 % Annual Power Performance

PACKAGING CONFIGURATION

Modules per box	30 pieces
Modules per 400 container	900 pieces



Vertex N Trinasolar

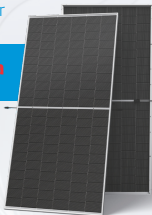
N-type i-TOPCon Ultra

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

TSM-NEG19RC,20 620-645W

645W / MAXIMUM POWER OUTPUT

23.9% / MAXIMUM EFFICIENCY



High customer value

- Best partner of 3P tracker, with highest utilization of tracker length
- Low voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 1%~5%
- Standardized module size with higher container space utilization effectively reduces the freight cost
- Excellent compatibility with existing mainstream systems components
- Certified Low-Carbon Footprint



High power up to 645W

- Up to 23.9% module efficiency, on 210 innovation platform
- Patented i-TOPCon technology with continuous efficiency upgrade, including contact resistance reduction, rear reflection enhancement and edge quality improvement



High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, H₂O, Li₂O
- Sustainable in harsh environments and extreme weather conditions



High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.29%/°C)
- Higher bifaciality, with up to 10%~20% additional power gain from back side depending on albedo
- Reliable dual-glass structure with 30-year power guarantee

Performance Warranty



*Based on the standard warranty for details

Comprehensive Products and System Certificates

- IEC6225 IEC62730 IEC61703 IEC62716 IUL62730
- ISO 9001: Quality Management System
- ISO 14001: Environmental Management System
- ISO 14064: Greenhouse Gases Emissions Verification
- ISO 45001: Occupational Health and Safety Management System
- ISO 14067: Product Carbon Footprint Limited Assurance



بازگشت

ادامه اطلاعات فنی

ELECTRICAL DATA (STC & NOCT & BNP)

Testing Condition	STC	NOCT	BNP	STC	NOCT	BNP	STC	NOCT	BNP	STC	NOCT	BNP	STC	NOCT	BNP	STC	NOCT	BNP
Peak Power (Watts-Peak[Wp])*	620	473	587	625	477	592	630	481	598	635	487	704	646	499	709	645	492	725
Power Selection (Wp)**	0 ~ -5																	
Maximum Power Voltage-Vmp(V)	40.24	37.90	43.24	40.46	38.10	43.46	40.68	38.30	43.68	40.90	38.50	43.88	41.06	38.70	44.06	41.22	38.80	44.22
Maximum Power Current-Imp(A)	15.41	12.47	17.07	15.45	12.52	17.12	15.49	12.57	17.16	15.53	12.60	17.23	15.58	12.67	17.28	15.63	12.70	17.34
Open Circuit Voltage-Voc(V)	48.50	46.10	48.50	48.70	46.30	48.70	48.90	46.50	48.90	49.10	46.80	49.10	49.30	46.90	49.30	49.52	47.00	49.52
Short Circuit Current-Isc(A)	16.26	13.10	18.00	16.32	13.15	18.08	16.38	13.20	18.15	16.44	13.25	18.22	16.51	13.30	18.29	16.56	13.33	18.34
Module Efficiency _{STC} (%)	23.0			23.1			23.3			23.5			23.7			23.9		

STC=reference 2000W/m², Cell Temperature 25°C, Air Mass 1.5, NOCT (reference of 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s). BNP (reference of 1000W/m², max 1700W/m², Temperature 25°C, Air Mass 1.5). *Measuring tolerance: ±1%. **Power selection up to ±1%.

Electrical characteristics with different power bin (reference to 1% & 10% backside power gain)

Backside Power Gain	5%		10%		5%		10%		5%		10%		5%		10%	
	1%	10%	1%	10%	1%	10%	1%	10%	1%	10%	1%	10%	1%	10%	1%	10%
Peak Power (Watts-Peak[Wp])	661	662	665	666	662	660	667	666	672	704	677	710	677	710	677	710
Maximum Power Voltage-Vmp(V)	40.24	40.24	40.46	40.46	40.68	40.68	40.89	40.89	41.06	41.06	41.22	41.22	41.22	41.22	41.22	41.22
Maximum Power Current-Imp(A)	16.18	16.95	16.22	17.80	16.26	17.04	16.33	17.11	16.38	17.28	16.45	17.22	16.45	17.22	16.45	17.22
Open Circuit Voltage-Voc(V)	48.50	48.50	48.70	48.70	48.90	48.90	49.10	49.10	49.30	49.30	49.52	49.52	49.52	49.52	49.52	49.52
Short Circuit Current-Isc(A)	17.07	17.83	17.14	17.95	17.20	18.02	17.26	18.06	17.34	18.15	17.30	18.21	17.30	18.21	17.30	18.21

TEMPERATURE RATINGS

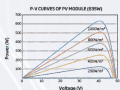
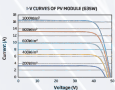
NOCT (Nominal Operating Cell Temperature)	49°C (121°C)
Temperature Coefficient of Power	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	0.04%/°C

Due to different testing methods, the actual performance might differ from the declared open circuit.

MAXIMUM RATINGS

Operational Temperature	-40 ~ +85°C
Maximum System Voltage	1500V DC (BC)
Max Series Fuse Rating	35A

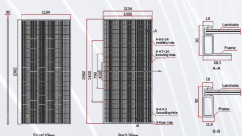
CURVES OF PV MODULE



MECHANICAL DATA

Solar Cells	H-type/52PCS Mono-crystalline
No. of cells	132 cells
Module Dimension	2282*1134*35 mm (89.8*44.6*1.38 inch)
Weight	5.62 kg per m ²
Front Glass	2.0 mm thick low iron, AR Coating/Heat Strengthened Glass
Back Glass	2.0 mm thick low iron, Heat Strengthened Glass (only some)
Frame	30mmx1.2mmx1.2mm Aluminum Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable-A Grade (as per user) Portable: 35A/330 mm ² MC4 (as per user) Length can be customized
Connector	MC4/MSD/TS4/PLUG/TS4*
Packaging	Module per case: 36 pieces Module per 40ft container: 720 pieces

*Please refer to regional distributor for specified connector.



Vertex N TrinaSolar

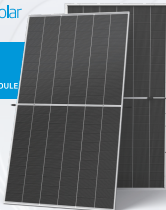
N-type i-TOPCon

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

TSM-NEG21C.20 700-725W

725W / MAXIMUM POWER OUTPUT

23.3% / MAXIMUM EFFICIENCY



High customer value

- Standardized module size with flagship module power, 30W higher compared with conventional technology
- Low voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 2%-5%
- Higher container space utilization effectively reduces the freight cost
- Certified Low-Carbon Footprint
- The Star of LCOE



High power up to 725W

- Up to 23.3% module efficiency, on 210 innovation platform
- Patented i-TOPCon technology with continuous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality repairment



High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, PDL, LID, LeTID
- Sustainable in harsh environments and extreme weather conditions



High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.23%/°C)
- Higher bifaciality, with up to 10%-20% additional power gain from back side depending on albedo
- Reliable dual-glass structure with 30-year power guarantee

Performance Warranty



Comprehensive Products and System Certificates

- ISO22540:60679/6051701/6052716
- ISO9001: Quality Management System
- ISO14001: Environmental Management System
- ISO14064: Greenhouse Gases Emissions Verification
- ISO45001: Occupational Health and Safety Management System
- ISO14067: Product Carbon Footprint Limited Assurance



بازگشت

ادامه اطلاعات فنی

ELECTRICAL DATA (STC & NOCT @ 800W)

Testing Condition	STC	NOCT	BMF1	STC	NOCT	BMF1	STC	NOCT	BMF1	STC	NOCT	BMF1	STC	NOCT	BMF1
Peak Power (Watts)-P _{max} (W)*	700	594	776	705	540	761	710	548	767	715	547	762	720	551	798
Power Selection (W)**	0 ~ +5														
Maximum Power Voltage-V _{mp} (V)	46.5	38.0	43.5	46.7	36.3	40.7	40.5	36.5	40.0	41.3	36.7	42.1	41.3	36.0	43.3
Maximum Power Current-I _{mp} (A)	17.29	14.04	19.25	17.53	14.08	23.19	17.96	14.32	19.25	17.86	14.34	19.28	17.44	14.29	23.52
Open Circuit Voltage-V _{oc} (V)	48.6	46.1	49.6	48.8	46.3	48.8	49.0	46.5	49.0	49.2	46.7	49.2	48.6	46.9	49.6
Short Circuit Current-I _{sc} (A)	20.32	14.76	20.30	20.36	14.80	20.24	18.40	14.83	20.29	18.44	14.86	20.43	18.49	14.90	20.40
Module Efficiency(%)	22.5			22.7			22.9			23.0			23.2		

STC: irradiance 1000W/m², cell temperature 25°C, AM1.5 Global, NOCT: irradiance 800W/m², Ambient temperature 20°C, wind speed 1m/s, BMF1: irradiance from 200W/m² to 1000W/m², cell temperature 25°C
*Measuring tolerance: ±3%, **Power selection: ±1%

Electrical characteristics with different power bin (reference to 0% & 10% back ratio power gain)

Back Ratio Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Peak Power (Watts)-P _{max} (W)	795	770	740	776	746	761	754	767	756	762	764	798	764	798
Maximum Power Voltage-V _{mp} (V)	43.5	43.5	40.7	40.7	40.9	40.9	41.1	41.3	41.3	41.3	41.5	41.5	41.5	41.5
Maximum Power Current-I _{mp} (A)	18.25	15.92	18.29	18.06	18.29	18.10	18.27	18.14	18.31	18.18	18.34	18.22	18.34	18.22
Open Circuit Voltage-V _{oc} (V)	49.6	49.6	48.8	49.0	49.0	49.0	49.2	49.2	49.4	49.4	49.6	49.6	49.6	49.6
Short Circuit Current-I _{sc} (A)	19.24	20.15	19.29	20.20	19.32	20.24	19.36	20.29	19.41	20.34	19.47	20.29	19.47	20.29

Power Efficiency: 90.1%

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (109°F)
Temperature Coefficient of P _{max}	-0.29%/°C
Temperature Coefficient of V _{oc}	-0.24%/°C
Temperature Coefficient of I _{sc}	0.04%/°C

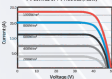
Note: In different testing methods, the actual parameters might differ from the declared specifications.

APPLICATION CONDITIONS

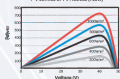
Operating Temperature	-40 ~ +70°C
Maximum System Voltage	1500V DC (EFC)
Max Series Fuse Rating	75A

CURVES OF PV MODULE

I-V CURVES OF PV MODULE (715W)



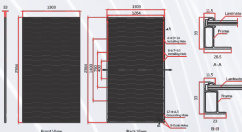
P-V CURVES OF PV MODULE (715W)



MECHANICAL DATA

Solar Cells	A-type 1 TOPCell Monocrystalline
No. of cells	132 cells
Module Dimensions	2094*1024*35mm (68.7*33.6*1.1inches)
Weight	36.3kg±0.4kg (80.0±0.9lb)
Front Glass	2.0mm±0.05mm Anti-Reflection Heat Strengthened Glass
Back Glass	2.0mm±0.05mm Heat Strengthened Glass anti-reflecting
Frame	Fluoropolymer Anodized Aluminum Alloy
J-Box	IP68 rated
Cables	Photovoltaic Technology Cable: 4-Core PV grade Polarity: 25A/250mm ² max. Length (can be customized)
Connector	MC4 EVOL / 154 Plus / 154*
Packaging	Modules per pallet: 33 pieces Modules per 40HQ container: 594 pieces

*Please refer to regional distributor for specific connector.





اینورتر

برند مورد نظر را انتخاب کنید

GROWATT ▶

 solis ▶

SUNGROW ▶

 HUAWEI ▶



بازگشت

تماس با پشتیبانی



اینورتر **GROWATT**

مدل مورد نظر را انتخاب کنید



On Grid

Max 100 - 125KTL3-XLV >



Off Grid

SPF 6000 ES Plus >



Hybrid

WIT 4-15K-HU >



بازگشت

تماس با پشتیبانی



Datasheet	SPF 6000 ES Plus
Battery voltage	60VDC
Battery type	LiFePO ₄ /Lead-acid
Inverter output	
Rated power	6000VA/6000W
Parallel capability	Yes, 4 units maximum
AC voltage regulation (Battery mode)	230VAC ± 5% @ 50/60Hz
Surge power	13000VA
Efficiency (peak)	93%
Waveform	Pure sine wave
Transfer time	10ms typical, 20ms Max
Solar charger	
Maximum PV array power	8000W
MPP range @ operating voltage	128VDC ~ 450VDC
Number of independent MPP trackers/ strings per MPP tracker	3/1
Max. input current per MPP tracker	10A
Maximum PV array open circuit voltage	500VDC
Maximum solar charge current	100A
AC charger	
Charge current	80A
AC input voltage	230VAC
Selectable voltage range	130-280 VAC (For personal computers) ; 90-280 VAC (For home appliances)
Frequency range	50Hz/60Hz (Auto sensing)
Physical	
Protection degree	IP23
Dimension (W/H/D)	440/395*132mm
Net weight	13.5kg
Operating environment	
Humidity	0% to 95% Relative humidity (Non-condensing)
Altitude	$+2000\text{m}$
Operating temperature	0°C ~ 50°C
Storage temperature	-15°C ~ +60°C


بازگشت
تماس با پشتیبانی


Datasheet	WT 4K-HU	WT 5K-HU	WT 6K-HU	WT 8K-HU	WT 10K-HU	WT 12K-HU	WT 15K-HU
Input data (PV)							
Max. recommended PV power	6000W	8000W	9600W	12000W	14000W	18000W	24000W
MPPT voltage (V _{OC})				180V			
Max. input voltage				180V			
Start voltage				80V			
Nominal voltage				80V			
MPPT voltage range				150V-850V			
Max. input current per MPPT tracker	40A					20A	40A
Max. short-circuit current per MPPT tracker	50A			15A		50A	
No. of PV strings per MPPT tracker	2			1		2/1	
No. of MPPT trackers	1			2		2	
Input/Output AC (including the Gen Port)							
AC input/output nominal power(G _{ref})	8000W/8000W	10000W/10000W	12000W/12000W	16000W/16000W	20000W/20000W	24000W/24000W	30000W/30000W
Max. AC input/output apparent power(S _{ref})	9800VA/9800VA	13000VA/13000VA	15600VA/15600VA	20800VA/20800VA	25000VA/25000VA	30000VA/30000VA	38000VA/38000VA
Max. input/output current(I _{ref})	13.4A/13.4A	16.7A/16.4A	20.0A/19.0A	26.8A/13.2A	33.2A/16.7A	48.8A/20.3A	50.1A/25.0A
Max. input current@GENAC coupled	12.2A	15.2A	18.2A	24.2A	30.4A	36.4A	45.6A
Max. continuous AC passthrough current	50.1A						
Nominal AC voltage/range	230V/230V, 220V/230V, +10%~-10%						
Nominal AC grid frequency/range	50/60Hz, 49-50.5/59.5-60.5 Hz						
Adjustable power factor	-1 ~ +1						
THDi	<3%						
AC grid connection type	3P3W-RS/3P3W-RS						
Battery data (DC)							
Battery type	Lead-Acid or LiFePO4						
Battery voltage range/Rated voltage	48V/51.2V						
Max. charging and discharging current	118A	125A	138A	200A	228A	250A	290A
BMS communication	RS485/CAN						
Backup power (AC)*							
Rated AC output power	4800W	5000W	6800W	8800W	10000W	12800W	15800W
Max. AC apparent power	2 times of rated power, 15s						
Rated AC output voltage	230V/230V, 230V/240V						
Nominal AC output frequency	50/60Hz						
Max. output current	12.2A@230V 11.4A@230V	15.2A@230V 14.4A@230V	18.2A@230V 20.0A@230V	24.2A@230V 23.2A@230V	30.4A@230V 29A@230V	36.4A@230V 34.8A@230V	45.6A@230V 43.4A@230V
THDi	3% (3 phase load)						
Load unbalance	100% three-phase unbalanced						
DC/AC grid transfer time	15ms						
Efficiency							
Max. efficiency	97.65%						
European efficiency	97.00%						
MPPT efficiency	99.95%						
Protection devices							
PV reverse polarity protection	Yes						
DC switch	Yes						
DC/AC surge protection	Type II Type III						
Insulation resistance monitoring	Yes						
Residual-current monitoring unit	Yes						
AC short-circuit protection	Yes						
Ground fault monitoring	Yes						
Grid monitoring	Yes						
Strings monitoring	Yes						
Anti-islanding protection	Yes						
IPD protection	Opt						
AFC Function	Opt						
General							
Dimensions (W x H x D)	415x345x240mm						
Weight	4.8kg						
Operating temperature range	-30°C ~ +50°C, (-15°C ~ +55°C, clearing)						
Noise	40dBS(A)						
Relative humidity	0-100%						
Altitude	3000m						
Topology	Transformerless						
Cooling	Smart air cooling						
IP degree	IP40						
Display	LED/LCD/MP						
Interfaces: RS485/LAN	Yes						
Interfaces: WiFi/LAN	Yes						
Warranty (3+10 years)	Yes/Yes						

WT 4K-HU, EC 41388, EC 41727, EC 42176, EC 41483, EC 40048, EN 50447, IEC 41381





اینورتر

مدل مورد نظر را انتخاب کنید



On Grid

80 - 125 K



On Grid

250 - 255 K



On Grid

350 K



بازگشت

تماس با پشتیبانی



DATASHEET
S6-GC(80-125)K
ON GRID

Models	80K	100K	110K	125K	125K-HV
Input DC					
Max. input voltage	110V				
Rated voltage	60V				120V
SOPT so voltage	38V				
MPPT voltage range	180-1200V				
Max. input current	4×142A/36A				5×142A/36A
Max. short circuit current	8×58A				10×58A
MPPT number / Max. input strings number	8 / 35				10 / 30
Output AC					
Rated output power	90 kW	100 kW	110 kW	125 kW	125 kW
Max. apparent output power	88 kVA	118 kVA	121 kVA	125 kVA	120.5 kVA
Max. output power	98 kW	110 kW	121 kW	115 kW	117.5 kW
Rated grid voltage	3/N/PE, 220 V/380V, 230 V/400V				3/PE, 400 V
Rated grid frequency	50 Hz/60 Hz				
Rated grid output current	121.6 A / 113.5 A	152.8 A / 143.3 A	181.1 A / 158.8 A	209.5 A / 200.4 A	150.4 A
Max. output current	133.7 A	167.1 A	183.8 A	209.5 A	185.4 A
Power factor	= 0.99 (0.8 leading - 0.8 lagging)				
THDi	= 3%				
Efficiency					
Max. efficiency	98.7%				
EU efficiency	98.8%				
Protection					
DC reverse polarity protection	Yes				
Short circuit protection	Yes				
Output over current protection	Yes				
Surge protection	DC Type II / AC Type II				
Grid monitoring	Yes				
Anti-islanding protection	Yes				
Temperature protection	Yes				
Strings monitoring	Yes				
IV Curve scanning	Yes				
Integrated MPD 2.0	Optional				
Integrated PID recovery	Optional				
Integrated DC switch	Yes				
Integrated AC switch	Optional				
General Data					
Dimensions (W × H × D)	1014 × 561 × 345 mm				
Weight	33 kg				36 kg
Topology	Transformerless				
Self-consumption (night)	+2 W				
Operating ambient temperature range	-30 ~ +40°C				
Relative humidity	0 ~ 100%				
Ingress protection	IP66				
Cooling concept	intelligent fan-cooling				
Max. operation altitude	4080 m				
Grid connection standard	GB, IEC61737, EN50549-1/2, VDE4118				
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 62109-6-2/-4				
Features					
DC connection	MC4 connector				
AC connection	CF terminal (max. 248 mm²)				
Display	LCD				
Communication	RS485, Optional: Wi-Fi, GPRS, PLC				


بازگشت
تماس با پشتیبانی


DATASHEET
Solis-(250-255)K-EHV-5G-PLUS
ON GRID

Models	250K	255K
Input DC		
Max. input voltage	250V	
Rated voltage	208V	
Start-up voltage	50V	
MPPT voltage range	48 - 158V	
Max. input current	12 + 36A	
Max. short circuit current	12 + 36A	
MPPT number / Max. input strings number	12 / 34	
Output AC		
Output power	250 kW@30°C / 120 kW@40°C / 220 kW@50°C	255 kW@30°C / 235 kW@40°C / 128 kW@50°C
Rated grid voltage	3/PE, 800 V	
Grid voltage range	840 - 920V	
Rated grid frequency	50 Hz / 60 Hz	
Max. output current	180.4A	194.0A
Power factor	+0.99 (0.8 leading - 0.8 lagging)	
THDi	< 3%	
Efficiency		
Max. efficiency	99.2%	
EU efficiency	98.8%	
Protection		
DC reverse polarity protection	Yes	
Short circuit protection	Yes	
Output over current protection	Yes	
Surge protection	DC Type II / AC Type II	
Grid monitoring	Yes	
Anti-islanding protection	Yes	
Temperature protection	Yes	
Strings monitoring	Yes	
UV Curve scanning	Yes	
Night time SGI function	Yes	
Integrated PID recovery	Yes	
Integrated DC switch	Yes	
General Data		
Dimensions (H x W x D)	1125 x 770 x 304 mm	
Weight	113 kg	
Topology	Transformerless	
Self-consumption (night)	+2 W	
Operating ambient temperature range	-30 ~ +60°C	
Relative humidity	0 - 100%	
Ingress protection	IP66	
Cooling concept	Intelligent fan-cooling	
Max. operation altitude	4000 m	
Grid connection standard	EN50438, IEC 61837, VDE0126, IEC61732, VDE4130, CEA 2013	
Safety / EMC standard	IEC/EN 62109-1/-3, IEC/EN 62038-4-2/4	
Features		
DC connection	MC4 connector	
AC connection	CF terminal (max. 300 mm ²)	
Display	LCD	
Communication	RS485, Optional, PLC	

DATASHEET
ON GRID

Models	350K
Input DC	
Max. input voltage	250 V
Rated voltage	250 V
Start-up voltage	50 V
MPPV voltage range	40 - 250 V
Max. input current	6 + 30 A
Max. short-circuit current	5 + 125 A
MPPV number / Max. input strings number	6 / 30
Output AC	
Rated output power	350 kW
Max. apparent output power	390 kVA
Rated grid voltage	570V, 800V
Grid voltage range	440 - 528 V
Rated grid frequency	50 Hz / 60 Hz
Max. output current	252.6 A
Power factor	+ 0.9 (0.8 leading - 0.9 lagging)
THD	< 3%
Efficiency	
Max. efficiency	99.8%
EU efficiency	98.7%
Protection	
DC reverse-polarity protection	Yes
Short-circuit protection	Yes
Output over-current protection	Yes
Surge protection	DC Type II / AC Type II
Grid monitoring	Yes
Anti-islanding protection	Yes
Temperature protection	Yes
Strings monitoring	Yes
UV Curve scanning	Yes
Night time SW function	Yes
Integrated PID recovery	Yes
Integrated DC switch	Yes
General Data	
Dimensions (W x H x D)	208 x 815 x 115.5 mm
Weight	117 kg
Topology	Transformerless
Self-consumption (night)	< 2 W
Operating ambient temperature range	-30 ~ +60°C
Relative humidity	0 ~ 100%
Ingress protection	IP66
Cooling concept	Intelligent fan-cooling
Max. operation altitude	4000 m
Grid connection standard	EN50461, EN-50471-2, VDE0126, IEC61721, VDE0430, CEA 2019
Safety / EMC standard	IEC61199-3-2, EN61800-6-2/4
Features	
DC connection	Matching connector
AC connection	DT terminal (max. 40 mm ²)
Display	LED indicator & Bluetooth + APP
Communication	RS485, Optional PLC

SUNGROW اینورتر

مدل مورد نظر را انتخاب کنید



On Grid

SG125CX-P2



On Grid

SG150CX



بازگشت

تماس با پشتیبانی



SUNGROW

ON GRID

Type designation	SG125CX-P2
Input (DC)	
Recommended max. PV input power	175 kW
Max. PV input voltage	1100 V
Min. PV input voltage / Startup input voltage	100 V / 200 V
Rated PV input voltage	600 V
MPP voltage range	180 - 1000 V
No. of independent MPP inputs	12
No. of PV strings per MPP	2
Max. PV input current	340 A (30 A * 12)
Max. DC short-circuit current	480 A (40 A * 12)
Max. current for DC connector	20A
Output (AC)	
Max. AC Output power	125 kVA (415 V @ 50 °C) *
Rated AC output apparent power	125 kVA (415 V @ 50 °C) *
Max. AC output current	180.1 A
Rated AC output current(at 230V)	180.1 A
Rated AC voltage	3 / N / PE, 230 / 400 V; 3 / N / PE, 240 / 415 V
AC voltage range	320 - 480 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 - 55 Hz / 55 - 65 Hz
Harmonic (THD)	< 3 % (at rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading - 0.8 lagging
Feed-in phases / connection phases	3 / 3-N-PE
Efficiency	
Max. efficiency / European efficiency	96.5% / 96.3%
Protection	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Surge protection	DC Type I + II / AC Type II
Ground fault monitoring	Yes
DC switch	Yes
PV string monitoring	Yes
Q at night function	Yes
Arc fault circuit interrupter (AFCI)	Yes
RID recovery function	Yes
General Data	
Dimensions (W*H*D)	1020*730*360 mm
Mounting Method	Wall-mounting bracket
Weight	87 kg
Topology	Transformerless
Degree of protection	IP66
Corrosion	C5
Night power consumption	< 5 W
Operating ambient temperature range	-30 to 60 °C
Allowable relative humidity range (non-condensing)	0 - 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display	LED, Bluetooth+APP
Optimizer	SP6005 (Optional)
Communication	RS485 / Optional: WLAN, Ethernet
DC connection type	Exo2 (Max. 6 mm ²)
AC connection type	DT / DT terminal (Max. 240 mm ²)
Grid Compliance	IEC 62109-1, EN/IEC 61000-4-12/14, IEC 61727, IEC 62196, EN 50549-1/2, UTE C15-712-1, VDE V 0126-1-1, VDE-AR-N 4105:2018, VFR 2019, NC RFG, C59, UNE 217002, NTS, CEI 0-21 2019, CEI 0-16 2019, NRS-097-2-1
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control



بازگشت

تماس با پشتیبانی



SUNGROW

ON GRID

Type designation	SG90CX
Input (DC)	
Recommended max. PV input power	210 kWp
Max. PV input voltage ¹⁾	1050 V
Min. PV input voltage / startup input voltage	180 V / 200 V
Rated PV input voltage	600 V 380 V / 400 V / 415 V / 720 V / 480 V
MPPV voltage range ²⁾	180 V - 830 V
No. of independent MPP inputs	7
No. of PV strings per MPP	3 / 3 / 3 / 3 / 3 / 3
Max. PV input current	18A (48 A * 3)
Max. DC short-circuit current	482 A (16 A * 7)
Max. current for DC connector	30 A
Output (AC)	
Rated AC output power	150 kW
Max. AC output apparent power	180 kVA
Max. AC output current	250.7 A @ 380 Vac; 240.6 A @ 400 Vac / 415 Vac; 200.5 A @ 480 Vac
Rated AC output current	223.4 A @ 380 Vac; 214.5 A @ 400 Vac / 415 Vac; 180.6 A @ 480 Vac
Rated AC voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V, 240 V / 415 V, 277 V / 480 V
AC voltage range	320 V - 480 V (380 V / 400 V / 415 V) 380 V - 582 V (480 V)
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	46 Hz - 63 Hz / 56 Hz - 66 Hz
Harmonic (THD)	±1% (at 400 V AC voltage and rated power) ±2% (at 480 V AC voltage and rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.81 leading / 0.81 lagging
Feed-in phases / AC connection	3 / S-N-PE
Efficiency	
Max. efficiency	96.8%
European efficiency	96.2% (380 V / 400 V / 415 V); 98.4% (480 V)
Protection & function	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Surge protection	DC Type I+II / AC Type II
Ground fault monitoring	Yes
DC switch	Yes
PV string current monitoring	Yes
Intelligent DC arc interrupter	Yes
Arc fault circuit interrupter (AFCI)	Yes
RIE recovery function	Yes
IPD compatibility ***	Optional
General data	
Dimensions (W * H * D)	825 mm * 794 mm * 360 mm
Weight	±100 kg
Mounting method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP66
Night power consumption	± 7 W
Corrosion	C5
Operating ambient temperature range	-30 °C - 60 °C
All possible relative humidity range (non-condensing)	0 - 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m
Display	LED, Bluetooth + APP
Communication	RS485 / WLAN (optional) / Ethernet (optional)
DC connection type	EVQ2 (Max. 6 mm)
AC connection type	OT / OT terminal (100-600 mm)
AC cable specification	Outside diameter 18 mm - 38 mm
Grid compliance	IEC EN 62109-1/2; IEC 60629; IEC 61000-6-1/2/3/4; IEC 61001; C-EMC; IEC 6302; EN 50549-1/10/2/10; IEC 61717; IEC 62176; IEC 61683; EN 50530; IEC 60069-1/2/14/20/30/64; IEC/EN 61000-5-1/1/2; IEC 62320; VDE4110; VDE4110; PSE 2018; NC PFG; TOR Graeger Typ A; TOR Graeger Typ B; DVC-Richtlinie RDS/03.20; D99; CEI 0-16; CEI 0-21; VDE0126; NTS UNE21700/07000; NTS 630; IEC60947-2; IEC 61831; IEC 61832; IEC 61833; IEC 61834; IEC 61835; IEC 61836; IEC 61837; IEC 61838; IEC 61839; IEC 61840; IEC 61841; IEC 61842; IEC 61843; IEC 61844; IEC 61845; IEC 61846; IEC 61847; IEC 61848; IEC 61849; IEC 61850; IEC 61851; IEC 61852; IEC 61853; IEC 61854; IEC 61855; IEC 61856; IEC 61857; IEC 61858; IEC 61859; IEC 61860; IEC 61861; IEC 61862; IEC 61863; IEC 61864; IEC 61865; IEC 61866; IEC 61867; IEC 61868; IEC 61869; IEC 61870; IEC 61871; IEC 61872; IEC 61873; IEC 61874; IEC 61875; IEC 61876; IEC 61877; IEC 61878; IEC 61879; IEC 61880; IEC 61881; IEC 61882; IEC 61883; IEC 61884; IEC 61885; IEC 61886; IEC 61887; IEC 61888; IEC 61889; IEC 61890; IEC 61891; IEC 61892; IEC 61893; IEC 61894; IEC 61895; IEC 61896; IEC 61897; IEC 61898; IEC 61899; IEC 61900; IEC 61901; IEC 61902; IEC 61903; IEC 61904; IEC 61905; IEC 61906; IEC 61907; IEC 61908; IEC 61909; IEC 61910; IEC 61911; IEC 61912; IEC 61913; IEC 61914; IEC 61915; IEC 61916; IEC 61917; IEC 61918; IEC 61919; IEC 61920; IEC 61921; IEC 61922; IEC 61923; IEC 61924; IEC 61925; IEC 61926; IEC 61927; IEC 61928; IEC 61929; IEC 61930; IEC 61931; IEC 61932; IEC 61933; IEC 61934; IEC 61935; IEC 61936; IEC 61937; IEC 61938; IEC 61939; IEC 61940; IEC 61941; IEC 61942; IEC 61943; IEC 61944; IEC 61945; IEC 61946; IEC 61947; IEC 61948; IEC 61949; IEC 61950; IEC 61951; IEC 61952; IEC 61953; IEC 61954; IEC 61955; IEC 61956; IEC 61957; IEC 61958; IEC 61959; IEC 61960; IEC 61961; IEC 61962; IEC 61963; IEC 61964; IEC 61965; IEC 61966; IEC 61967; IEC 61968; IEC 61969; IEC 61970; IEC 61971; IEC 61972; IEC 61973; IEC 61974; IEC 61975; IEC 61976; IEC 61977; IEC 61978; IEC 61979; IEC 61980; IEC 61981; IEC 61982; IEC 61983; IEC 61984; IEC 61985; IEC 61986; IEC 61987; IEC 61988; IEC 61989; IEC 61990; IEC 61991; IEC 61992; IEC 61993; IEC 61994; IEC 61995; IEC 61996; IEC 61997; IEC 61998; IEC 61999; IEC 62000; IEC 62001; IEC 62002; IEC 62003; IEC 62004; IEC 62005; IEC 62006; IEC 62007; IEC 62008; IEC 62009; IEC 62010; IEC 62011; IEC 62012; IEC 62013; IEC 62014; IEC 62015; IEC 62016; IEC 62017; IEC 62018; IEC 62019; IEC 62020; IEC 62021; IEC 62022; IEC 62023; IEC 62024; IEC 62025; IEC 62026; IEC 62027; IEC 62028; IEC 62029; IEC 62030; IEC 62031; IEC 62032; IEC 62033; IEC 62034; IEC 62035; IEC 62036; IEC 62037; IEC 62038; IEC 62039; IEC 62040; IEC 62041; IEC 62042; IEC 62043; IEC 62044; IEC 62045; IEC 62046; IEC 62047; IEC 62048; IEC 62049; IEC 62050; IEC 62051; IEC 62052; IEC 62053; IEC 62054; IEC 62055; IEC 62056; IEC 62057; IEC 62058; IEC 62059; IEC 62060; IEC 62061; IEC 62062; IEC 62063; IEC 62064; IEC 62065; IEC 62066; IEC 62067; IEC 62068; IEC 62069; IEC 62070; IEC 62071; IEC 62072; IEC 62073; IEC 62074; IEC 62075; IEC 62076; IEC 62077; IEC 62078; IEC 62079; IEC 62080; IEC 62081; IEC 62082; IEC 62083; IEC 62084; IEC 62085; IEC 62086; IEC 62087; IEC 62088; IEC 62089; IEC 62090; IEC 62091; IEC 62092; IEC 62093; IEC 62094; IEC 62095; IEC 62096; IEC 62097; IEC 62098; IEC 62099; IEC 62100; IEC 62101; IEC 62102; IEC 62103; IEC 62104; IEC 62105; IEC 62106; IEC 62107; IEC 62108; IEC 62109; IEC 62110; IEC 62111; IEC 62112; IEC 62113; IEC 62114; IEC 62115; IEC 62116; IEC 62117; IEC 62118; IEC 62119; IEC 62120; IEC 62121; IEC 62122; IEC 62123; IEC 62124; IEC 62125; IEC 62126; IEC 62127; IEC 62128; IEC 62129; IEC 62130; IEC 62131; IEC 62132; IEC 62133; IEC 62134; IEC 62135; IEC 62136; IEC 62137; IEC 62138; IEC 62139; IEC 62140; IEC 62141; IEC 62142; IEC 62143; IEC 62144; IEC 62145; IEC 62146; IEC 62147; IEC 62148; IEC 62149; IEC 62150; IEC 62151; IEC 62152; IEC 62153; IEC 62154; IEC 62155; IEC 62156; IEC 62157; IEC 62158; IEC 62159; IEC 62160; IEC 62161; IEC 62162; IEC 62163; IEC 62164; IEC 62165; IEC 62166; IEC 62167; IEC 62168; IEC 62169; IEC 62170; IEC 62171; IEC 62172; IEC 62173; IEC 62174; IEC 62175; IEC 62176; IEC 62177; IEC 62178; IEC 62179; IEC 62180; IEC 62181; IEC 62182; IEC 62183; IEC 62184; IEC 62185; IEC 62186; IEC 62187; IEC 62188; IEC 62189; IEC 62190; IEC 62191; IEC 62192; IEC 62193; IEC 62194; IEC 62195; IEC 62196; IEC 62197; IEC 62198; IEC 62199; IEC 62200; IEC 62201; IEC 62202; IEC 62203; IEC 62204; IEC 62205; IEC 62206; IEC 62207; IEC 62208; IEC 62209; IEC 62210; IEC 62211; IEC 62212; IEC 62213; IEC 62214; IEC 62215; IEC 62216; IEC 62217; IEC 62218; IEC 62219; IEC 62220; IEC 62221; IEC 62222; IEC 62223; IEC 62224; IEC 62225; IEC 62226; IEC 62227; IEC 62228; IEC 62229; IEC 62230; IEC 62231; IEC 62232; IEC 62233; IEC 62234; IEC 62235; IEC 62236; IEC 62237; IEC 62238; IEC 62239; IEC 62240; IEC 62241; IEC 62242; IEC 62243; IEC 62244; IEC 62245; IEC 62246; IEC 62247; IEC 62248; IEC 62249; IEC 62250; IEC 62251; IEC 62252; IEC 62253; IEC 62254; IEC 62255; IEC 62256; IEC 62257; IEC 62258; IEC 62259; IEC 62260; IEC 62261; IEC 62262; IEC 62263; IEC 62264; IEC 62265; IEC 62266; IEC 62267; IEC 62268; IEC 62269; IEC 62270; IEC 62271; IEC 62272; IEC 62273; IEC 62274; IEC 62275; IEC 62276; IEC 62277; IEC 62278; IEC 62279; IEC 62280; IEC 62281; IEC 62282; IEC 62283; IEC 62284; IEC 62285; IEC 62286; IEC 62287; IEC 62288; IEC 62289; IEC 62290; IEC 62291; IEC 62292; IEC 62293; IEC 62294; IEC 62295; IEC 62296; IEC 62297; IEC 62298; IEC 62299; IEC 62300; IEC 62301; IEC 62302; IEC 62303; IEC 62304; IEC 62305; IEC 62306; IEC 62307; IEC 62308; IEC 62309; IEC 62310; IEC 62311; IEC 62312; IEC 62313; IEC 62314; IEC 62315; IEC 62316; IEC 62317; IEC 62318; IEC 62319; IEC 62320; IEC 62321; IEC 62322; IEC 62323; IEC 62324; IEC 62325; IEC 62326; IEC 62327; IEC 62328; IEC 62329; IEC 62330; IEC 62331; IEC 62332; IEC 62333; IEC 62334; IEC 62335; IEC 62336; IEC 62337; IEC 62338; IEC 62339; IEC 62340; IEC 62341; IEC 62342; IEC 62343; IEC 62344; IEC 62345; IEC 62346; IEC 62347; IEC 62348; IEC 62349; IEC 62350; IEC 62351; IEC 62352; IEC 62353; IEC 62354; IEC 62355; IEC 62356; IEC 62357; IEC 62358; IEC 62359; IEC 62360; IEC 62361; IEC 62362; IEC 62363; IEC 62364; IEC 62365; IEC 62366; IEC 62367; IEC 62368; IEC 62369; IEC 62370; IEC 62371; IEC 62372; IEC 62373; IEC 62374; IEC 62375; IEC 62376; IEC 62377; IEC 62378; IEC 62379; IEC 62380; IEC 62381; IEC 62382; IEC 62383; IEC 62384; IEC 62385; IEC 62386; IEC 62387; IEC 62388; IEC 62389; IEC 62390; IEC 62391; IEC 62392; IEC 62393; IEC 62394; IEC 62395; IEC 62396; IEC 62397; IEC 62398; IEC 62399; IEC 62400; IEC 62401; IEC 62402; IEC 62403; IEC 62404; IEC 62405; IEC 62406; IEC 62407; IEC 62408; IEC 62409; IEC 62410; IEC 62411; IEC 62412; IEC 62413; IEC 62414; IEC 62415; IEC 62416; IEC 62417; IEC 62418; IEC 62419; IEC 62420; IEC 62421; IEC 62422; IEC 62423; IEC 62424; IEC 62425; IEC 62426; IEC 62427; IEC 62428; IEC 62429; IEC 62430; IEC 62431; IEC 62432; IEC 62433; IEC 62434; IEC 62435; IEC 62436; IEC 62437; IEC 62438; IEC 62439; IEC 62440; IEC 62441; IEC 62442; IEC 62443; IEC 62444; IEC 62445; IEC 62446; IEC 62447; IEC 62448; IEC 62449; IEC 62450; IEC 62451; IEC 62452; IEC 62453; IEC 62454; IEC 62455; IEC 62456; IEC 62457; IEC 62458; IEC 62459; IEC 62460; IEC 62461; IEC 62462; IEC 62463; IEC 62464; IEC 62465; IEC 62466; IEC 62467; IEC 62468; IEC 62469; IEC 62470; IEC 62471; IEC 62472; IEC 62473; IEC 62474; IEC 62475; IEC 62476; IEC 62477; IEC 62478; IEC 62479; IEC 62480; IEC 62481; IEC 62482; IEC 62483; IEC 62484; IEC 62485; IEC 62486; IEC 62487; IEC 62488; IEC 62489; IEC 62490; IEC 62491; IEC 62492; IEC 62493; IEC 62494; IEC 62495; IEC 62496; IEC 62497; IEC 62498; IEC 62499; IEC 62500; IEC 62501; IEC 62502; IEC 62503; IEC 62504; IEC 62505; IEC 62506; IEC 62507; IEC 62508; IEC 62509; IEC 62510; IEC 62511; IEC 62512; IEC 62513; IEC 62514; IEC 62515; IEC 62516; IEC 62517; IEC 62518; IEC 62519; IEC 62520; IEC 62521; IEC 62522; IEC 62523; IEC 62524; IEC 62525; IEC 62526; IEC 62527; IEC 62528; IEC 62529; IEC 62530; IEC 62531; IEC 62532; IEC 62533; IEC 62534; IEC 62535; IEC 62536; IEC 62537; IEC 62538; IEC 62539; IEC 62540; IEC 62541; IEC 62542; IEC 62543; IEC 62544; IEC 62545; IEC 62546; IEC 62547; IEC 62548; IEC 62549; IEC 62550; IEC 62551; IEC 62552; IEC 62553; IEC 62554; IEC 62555; IEC 62556; IEC 62557; IEC 62558; IEC 62559; IEC 62560; IEC 62561; IEC 62562; IEC 62563; IEC 62564; IEC 62565; IEC 62566; IEC 62567; IEC 62568; IEC 62569; IEC 62570; IEC 62571; IEC 62572; IEC 62573; IEC 62574; IEC 62575; IEC 62576; IEC 62577; IEC 62578; IEC 62579; IEC 62580; IEC 62581; IEC 62582; IEC 62583; IEC 62584; IEC 62585; IEC 62586; IEC 62587; IEC 62588; IEC 62589; IEC 62590; IEC 62591; IEC 62592; IEC 62593; IEC 62594; IEC 62595; IEC 62596; IEC 62597; IEC 62598; IEC 62599; IEC 62600; IEC 62601; IEC 62602; IEC 62603; IEC 62604; IEC 62605; IEC 62606; IEC 62607; IEC 62608; IEC 62609; IEC 62610; IEC 62611; IEC 62612; IEC 62613; IEC 62614; IEC 62615; IEC 62616; IEC 62617; IEC 62618; IEC 62619; IEC 62620; IEC 62621; IEC 62622; IEC 62623; IEC 62624; IEC 62625; IEC 62626; IEC 62627; IEC 62628; IEC 62629; IEC 62630; IEC 62631; IEC 62632; IEC 62633; IEC 62634; IEC 62635; IEC 62636; IEC 62637; IEC 62638; IEC 62639; IEC 62640; IEC 62641; IEC 62642; IEC 62643; IEC 62644; IEC 62645; IEC 62646; IEC 62647; IEC 62648; IEC 62649; IEC 62650; IEC 62651; IEC 62652; IEC 62653; IEC 62654; IEC 62655; IEC 62656; IEC 62657; IEC 62658; IEC 62659; IEC 62660; IEC 62661; IEC 62662; IEC 62663; IEC 62664; IEC 62665; IEC 62666; IEC 62667; IEC 62668; IEC 62669; IEC 62670; IEC 62671; IEC 62672; IEC 62673; IEC 62674; IEC 62675; IEC 62676; IEC 62677; IEC 62678; IEC 62679; IEC 62680; IEC 62681; IEC 62682; IEC 62683; IEC 62684; IEC 62685; IEC 62686; IEC 62687; IEC 62688; IEC 62689; IEC 62690; IEC 62691; IEC 62692; IEC 62693; IEC 62694; IEC 62695; IEC 62696; IEC 62697; IEC 62698; IEC 62699; IEC 62700; IEC 62701; IEC 62702; IEC 62703; IEC 62704; IEC 62705; IEC 62706; IEC 62707; IEC 62708; IEC 62709; IEC 62710; IEC 62711; IEC 62712; IEC 62713; IEC 62714; IEC 62715; IEC 62716; IEC 62717; IEC 62718; IEC 62719; IEC 62720; IEC 62721; IEC 62722; IEC 62723; IEC 62724; IEC 62725; IEC 62726; IEC 62727; IEC 62728; IEC 62729; IEC 62730; IEC 62731; IEC 62732; IEC 62733; IEC 62734; IEC 62735; IEC 62736; IEC 62737; IEC 62738; IEC 62739; IEC 62740; IEC 62741; IEC 62742; IEC 62743; IEC 62744; IEC 62745; IEC 62746; IEC 62747; IEC 62748; IEC 62749; IEC 62750; IEC 62751; IEC 62752; IEC 62753; IEC 62754; IEC 62755; IEC 62756; IEC 62757; IEC 62758; IEC 62759; IEC 62760; IEC 62761; IEC 62762; IEC 62763; IEC 62764; IEC 62765; IEC 62766; IEC 62767; IEC 62768; IEC 62769; IEC 62770; IEC 62771; IEC 62772; IEC 62773; IEC 62774; IEC 62775; IEC 62776; IEC 62777; IEC 62778; IEC 62779; IEC 62780; IEC 62781; IEC 62782; IEC 62783; IEC 62784; IEC 62785; IEC 62786; IEC 62787; IEC 62788; IEC 62789; IEC 62790; IEC 62791; IEC 62792; IEC 62793; IEC 62794; IEC 62795; IEC 62796; IEC 62797; IEC 62798; IEC 62799; IEC 62800; IEC 62801; IEC 62802; IEC 62803; IEC 62804; IEC 62805; IEC 62806; IEC 62807; IEC 62808; IEC 62809; IEC 62810; IEC 62811; IEC 62812; IEC 62813; IEC 62814; IEC 62815; IEC 62816; IEC 62817; IEC 62818; IEC 62819; IEC 62820; IEC 62821; IEC 62822; IEC 62823; IEC 62824; IEC 62825; IEC 62826; IEC 62827; IEC 62828; IEC 62829; IEC 62830; IEC 62831; IEC 62832; IEC 62833; IEC 62834; IEC 62835; IEC 62836; IEC 62837; IEC 62838; IEC 62839; IEC 62840; IEC 62841; IEC 62842; IEC 62843; IEC 62844; IEC 62845; IEC 62846; IEC 62847; IEC 62848; IEC 62849; IEC 62850; IEC 62851; IEC 62852; IEC 62853; IEC 62854; IEC 62855; IEC 62856; IEC 62857; IEC 62858; IEC 62859; IEC 62860; IEC 62861; IEC 62862; IEC 62863; IEC 62864; IEC 62865; IEC 62866; IEC 62867; IEC 62868; IEC 62869; IEC 62870; IEC 62871; IEC 62872; IEC 62873; IEC 62874; IEC 62875; IEC 62876; IEC 62877; IEC 62878; IEC 62879; IEC 62880; IEC 62881; IEC 62882; IEC 62883; IEC 62884; IEC 62885; IEC 62886; IEC 62887; IEC 62888; IEC 62889; IEC 62890; IEC 62891; IEC 62892; IEC 62893; IEC 62894; IEC 62895; IEC 62896; IEC 62897; IEC 62898; IEC 62899; IEC 62900; IEC 62901; IEC 62902; IEC 62903; IEC 62904; IEC 62905; IEC 62906; IEC 62907; IEC 62908; IEC 62909; IEC 62910; IEC 62911; IEC 62912; IEC 62913; IEC 62914; IEC 62915; IEC 62916; IEC 62917; IEC 62918; IEC 62919; IEC 62920; IEC 62921; IEC 62922; IEC 62923; IEC 62924; IEC 62925; IEC 62926; IEC 62927; IEC 62928; IEC 62929; IEC 62930; IEC 62931; IEC 62932; IEC 62933; IEC 62934; IEC 62935; IEC 62936; IEC 62937; IEC 62938; IEC 62939; I



HUAWEI

اینورتر

مدل مورد نظر را انتخاب کنید



On Grid

SUN2000-115KTL-M2 >



On Grid

SUN2000-330KTL-H2 >



بازگشت

تماس با پشتیبانی



Technical Specification		SUN2000-115KTL-M2
Efficiency		
Max. efficiency		97.5% (400 V, 700 W, 0-480 V)
European efficiency		96.4% (400 V, 700 W, 0-480 V)
Input		
Max. Input Voltage		1,100 V
Max. Current per MPPT		30 A
Max. Current per input		30 A
Max. Short-Circuit Current per MPPT		40 A
Start Voltage		230 V
MPPT Operating Voltage Range *		300 V ~ 1,000 V
Harmonic Input Voltage		480 V (400 Vac, 720 V (480 Vac)
Number of MPPT trackers		10
Max. Input Number per MPPT Tracker		2
Output		
Harmonic AC Active Power		115,000 W
Max. AC Apparent Power		125,000 VA
Max. AC Active Power (3-phase)		120,000 W
Harmonic Output Voltage		400 V (480 V, 720 V) (480)
Rated AC Grid Frequency		50/60 (40) Hz
Harmonic Output Current		166.6 A (480 V, 130 A (480 V)
Max. Output Current		167.1 A (480 V, 131 A (480 V)
Adjustable Power Factor Range		0.8 leading ~ 0.8 lagging
Max. Total Harmonic Distortion		< 3%
Protection		
Input-side Disconnection Device		Yes
Anti-Islanding Protection		Yes
AC Overcurrent Protection		Yes
DC Reverse-polarity Protection		Yes
PT Voltage String Fault Monitoring		Yes
DC Surge Arrester		Type II
AC Surge Arrester		Type I
DC Insulation Resistance Detection		Yes
Residual Current Monitoring (RCD)		Yes
Smart String Level Disconnect		Yes
Communication		
Display		LED Indicators; WLAN adapter + External APP
RS485		Yes
USB		Yes
Smart Dongle (4G)		Smart Dongle + 4G / WLAN (Optional)
Monitoring (2) - mG5		Yes (external transformer required)
General Data		
Dimensions (H x W x D)		1,000 x 500 x 360 mm
Weight (with mounting plate)		91 kg
Operating Temperature Range		-25°C ~ 60°C
Cooling Method		Smart Air Cooling
Max. Operating Wind Speed		4.000 m/s (11.11 P.S)
Relative Humidity		0 ~ 100%
DC Connector		Impressed Helix HD
AC Connector		Waterproof Connector + 2P/2P Terminal
Protection Degree		IP66
Topology		Three-Phase
High-Diode Power Consumption		< 1.5 W
Standard Compliance (more available upon request)		
CE mark		EN 50548-1/2, EN 50549-1/2, EN 50549-3, EN 50549-4, EN 50549-5, EN 50549-6, EN 50549-7, EN 50549-8, EN 50549-9, EN 50549-10, EN 50549-11, EN 50549-12, EN 50549-13, EN 50549-14, EN 50549-15, EN 50549-16, EN 50549-17, EN 50549-18, EN 50549-19, EN 50549-20, EN 50549-21, EN 50549-22, EN 50549-23, EN 50549-24, EN 50549-25, EN 50549-26, EN 50549-27, EN 50549-28, EN 50549-29, EN 50549-30, EN 50549-31, EN 50549-32, EN 50549-33, EN 50549-34, EN 50549-35, EN 50549-36, EN 50549-37, EN 50549-38, EN 50549-39, EN 50549-40, EN 50549-41, EN 50549-42, EN 50549-43, EN 50549-44, EN 50549-45, EN 50549-46, EN 50549-47, EN 50549-48, EN 50549-49, EN 50549-50, EN 50549-51, EN 50549-52, EN 50549-53, EN 50549-54, EN 50549-55, EN 50549-56, EN 50549-57, EN 50549-58, EN 50549-59, EN 50549-60, EN 50549-61, EN 50549-62, EN 50549-63, EN 50549-64, EN 50549-65, EN 50549-66, EN 50549-67, EN 50549-68, EN 50549-69, EN 50549-70, EN 50549-71, EN 50549-72, EN 50549-73, EN 50549-74, EN 50549-75, EN 50549-76, EN 50549-77, EN 50549-78, EN 50549-79, EN 50549-80, EN 50549-81, EN 50549-82, EN 50549-83, EN 50549-84, EN 50549-85, EN 50549-86, EN 50549-87, EN 50549-88, EN 50549-89, EN 50549-90, EN 50549-91, EN 50549-92, EN 50549-93, EN 50549-94, EN 50549-95, EN 50549-96, EN 50549-97, EN 50549-98, EN 50549-99, EN 50549-100
UL mark (with UL listing)		UL 1741, UL 1741E, UL 1741F, UL 1741G, UL 1741H, UL 1741I, UL 1741J, UL 1741K, UL 1741L, UL 1741M, UL 1741N, UL 1741O, UL 1741P, UL 1741Q, UL 1741R, UL 1741S, UL 1741T, UL 1741U, UL 1741V, UL 1741W, UL 1741X, UL 1741Y, UL 1741Z, UL 1741AA, UL 1741AB, UL 1741AC, UL 1741AD, UL 1741AE, UL 1741AF, UL 1741AG, UL 1741AH, UL 1741AI, UL 1741AJ, UL 1741AK, UL 1741AL, UL 1741AM, UL 1741AN, UL 1741AO, UL 1741AP, UL 1741AQ, UL 1741AR, UL 1741AS, UL 1741AT, UL 1741AU, UL 1741AV, UL 1741AW, UL 1741AX, UL 1741AY, UL 1741AZ, UL 1741BA, UL 1741BB, UL 1741BC, UL 1741BD, UL 1741BE, UL 1741BF, UL 1741BG, UL 1741BH, UL 1741BI, UL 1741BJ, UL 1741BK, UL 1741BL, UL 1741BM, UL 1741BN, UL 1741BO, UL 1741BP, UL 1741BQ, UL 1741BR, UL 1741BS, UL 1741BT, UL 1741BU, UL 1741BV, UL 1741BW, UL 1741BX, UL 1741BY, UL 1741BZ, UL 1741CA, UL 1741CB, UL 1741CC, UL 1741CD, UL 1741CE, UL 1741CF, UL 1741CG, UL 1741CH, UL 1741CI, UL 1741CJ, UL 1741CK, UL 1741CL, UL 1741CM, UL 1741CN, UL 1741CO, UL 1741CP, UL 1741CQ, UL 1741CR, UL 1741CS, UL 1741CT, UL 1741CU, UL 1741CV, UL 1741CW, UL 1741CX, UL 1741CY, UL 1741CZ, UL 1741DA, UL 1741DB, UL 1741DC, UL 1741DD, UL 1741DE, UL 1741DF, UL 1741DG, UL 1741DH, UL 1741DI, UL 1741DJ, UL 1741DK, UL 1741DL, UL 1741DM, UL 1741DN, UL 1741DO, UL 1741DP, UL 1741DQ, UL 1741DR, UL 1741DS, UL 1741DT, UL 1741DU, UL 1741DV, UL 1741DW, UL 1741DX, UL 1741DY, UL 1741DZ, UL 1741EA, UL 1741EB, UL 1741EC, UL 1741ED, UL 1741EE, UL 1741EF, UL 1741EG, UL 1741EH, UL 1741EI, UL 1741EJ, UL 1741EK, UL 1741EL, UL 1741EM, UL 1741EN, UL 1741EO, UL 1741EP, UL 1741EQ, UL 1741ER, UL 1741ES, UL 1741ET, UL 1741EU, UL 1741EV, UL 1741EW, UL 1741EX, UL 1741EY, UL 1741EZ, UL 1741FA, UL 1741FB, UL 1741FC, UL 1741FD, UL 1741FE, UL 1741FF, UL 1741FG, UL 1741FH, UL 1741FI, UL 1741FJ, UL 1741FK, UL 1741FL, UL 1741FM, UL 1741FN, UL 1741FO, UL 1741FP, UL 1741FQ, UL 1741FR, UL 1741FS, UL 1741FT, UL 1741FU, UL 1741FV, UL 1741FW, UL 1741FX, UL 1741FY, UL 1741FZ, UL 1741GA, UL 1741GB, UL 1741GC, UL 1741GD, UL 1741GE, UL 1741GF, UL 1741GG, UL 1741GH, UL 1741GI, UL 1741GJ, UL 1741GK, UL 1741GL, UL 1741GM, UL 1741GN, UL 1741GO, UL 1741GP, UL 1741GQ, UL 1741GR, UL 1741GS, UL 1741GT, UL 1741GU, UL 1741GV, UL 1741GW, UL 1741GX, UL 1741GY, UL 1741GZ, UL 1741HA, UL 1741HB, UL 1741HC, UL 1741HD, UL 1741HE, UL 1741HF, UL 1741HG, UL 1741HH, UL 1741HI, UL 1741HJ, UL 1741HK, UL 1741HL, UL 1741HM, UL 1741HN, UL 1741HO, UL 1741HP, UL 1741HQ, UL 1741HR, UL 1741HS, UL 1741HT, UL 1741HU, UL 1741HV, UL 1741HW, UL 1741HX, UL 1741HY, UL 1741HZ, UL 1741IA, UL 1741IB, UL 1741IC, UL 1741ID, UL 1741IE, UL 1741IF, UL 1741IG, UL 1741IH, UL 1741II, UL 1741IJ, UL 1741IK, UL 1741IL, UL 1741IM, UL 1741IN, UL 1741IO, UL 1741IP, UL 1741IQ, UL 1741IR, UL 1741IS, UL 1741IT, UL 1741IU, UL 1741IV, UL 1741IW, UL 1741IX, UL 1741IY, UL 1741IZ, UL 1741JA, UL 1741JB, UL 1741JC, UL 1741JD, UL 1741JE, UL 1741JF, UL 1741JG, UL 1741JH, UL 1741JI, UL 1741JJ, UL 1741JK, UL 1741JL, UL 1741JM, UL 1741JN, UL 1741JO, UL 1741JP, UL 1741JQ, UL 1741JR, UL 1741JS, UL 1741JT, UL 1741JU, UL 1741JV, UL 1741JW, UL 1741JX, UL 1741JY, UL 1741JZ, UL 1741KA, UL 1741KB, UL 1741KC, UL 1741KD, UL 1741KE, UL 1741KF, UL 1741KG, UL 1741KH, UL 1741KI, UL 1741KJ, UL 1741KK, UL 1741KL, UL 1741KM, UL 1741KN, UL 1741KO, UL 1741KP, UL 1741KQ, UL 1741KR, UL 1741KS, UL 1741KT, UL 1741KU, UL 1741KV, UL 1741KW, UL 1741KX, UL 1741KY, UL 1741KZ, UL 1741LA, UL 1741LB, UL 1741LC, UL 1741LD, UL 1741LE, UL 1741LF, UL 1741LG, UL 1741LH, UL 1741LI, UL 1741LJ, UL 1741LK, UL 1741LL, UL 1741LM, UL 1741LN, UL 1741LO, UL 1741LP, UL 1741LQ, UL 1741LR, UL 1741LS, UL 1741LT, UL 1741LU, UL 1741LV, UL 1741LW, UL 1741LX, UL 1741LY, UL 1741LZ, UL 1741MA, UL 1741MB, UL 1741MC, UL 1741MD, UL 1741ME, UL 1741MF, UL 1741MG, UL 1741MH, UL 1741MI, UL 1741MJ, UL 1741MK, UL 1741ML, UL 1741MN, UL 1741MO, UL 1741MP, UL 1741MQ, UL 1741MR, UL 1741MS, UL 1741MT, UL 1741MU, UL 1741MV, UL 1741MW, UL 1741MX, UL 1741MY, UL 1741MZ, UL 1741NA, UL 1741NB, UL 1741NC, UL 1741ND, UL 1741NE, UL 1741NF, UL 1741NG, UL 1741NH, UL 1741NI, UL 1741NJ, UL 1741NK, UL 1741NL, UL 1741NM, UL 1741NN, UL 1741NO, UL 1741NP, UL 1741NQ, UL 1741NR, UL 1741NS, UL 1741NT, UL 1741NU, UL 1741NV, UL 1741NW, UL 1741NX, UL 1741NY, UL 1741NZ, UL 1741OA, UL 1741OB, UL 1741OC, UL 1741OD, UL 1741OE, UL 1741OF, UL 1741OG, UL 1741OH, UL 1741OI, UL 1741OJ, UL 1741OK, UL 1741OL, UL 1741OM, UL 1741ON, UL 1741OO, UL 1741OP, UL 1741OQ, UL 1741OR, UL 1741OS, UL 1741OT, UL 1741OU, UL 1741OV, UL 1741OW, UL 1741OX, UL 1741OY, UL 1741OZ, UL 1741PA, UL 1741PB, UL 1741PC, UL 1741PD, UL 1741PE, UL 1741PF, UL 1741PG, UL 1741PH, UL 1741PI, UL 1741PJ, UL 1741PK, UL 1741PL, UL 1741PM, UL 1741PN, UL 1741PO, UL 1741PP, UL 1741PQ, UL 1741PR, UL 1741PS, UL 1741PT, UL 1741PU, UL 1741PV, UL 1741PW, UL 1741PX, UL 1741PY, UL 1741PZ, UL 1741QA, UL 1741QB, UL 1741QC, UL 1741QD, UL 1741QE, UL 1741QF, UL 1741QG, UL 1741QH, UL 1741QI, UL 1741QJ, UL 1741QK, UL 1741QL, UL 1741QM, UL 1741QN, UL 1741QO, UL 1741QP, UL 1741QQ, UL 1741QR, UL 1741QS, UL 1741QT, UL 1741QU, UL 1741QV, UL 1741QW, UL 1741QX, UL 1741QY, UL 1741QZ, UL 1741RA, UL 1741RB, UL 1741RC, UL 1741RD, UL 1741RE, UL 1741RF, UL 1741RG, UL 1741RH, UL 1741RI, UL 1741RJ, UL 1741RK, UL 1741RL, UL 1741RM, UL 1741RN, UL 1741RO, UL 1741RP, UL 1741RQ, UL 1741RR, UL 1741RS, UL 1741RT, UL 1741RU, UL 1741RV, UL 1741RW, UL 1741RX, UL 1741RY, UL 1741RZ, UL 1741SA, UL 1741SB, UL 1741SC, UL 1741SD, UL 1741SE, UL 1741SF, UL 1741SG, UL 1741SH, UL 1741SI, UL 1741SJ, UL 1741SK, UL 1741SL, UL 1741SM, UL 1741SN, UL 1741SO, UL 1741SP, UL 1741SQ, UL 1741SR, UL 1741SS, UL 1741ST, UL 1741SU, UL 1741SV, UL 1741SW, UL 1741SX, UL 1741SY, UL 1741SZ, UL 1741TA, UL 1741TB, UL 1741TC, UL 1741TD, UL 1741TE, UL 1741TF, UL 1741TG, UL 1741TH, UL 1741TI, UL 1741TJ, UL 1741TK, UL 1741TL, UL 1741TM, UL 1741TN, UL 1741TO, UL 1741TP, UL 1741TQ, UL 1741TR, UL 1741TS, UL 1741TT, UL 1741TU, UL 1741TV, UL 1741TW, UL 1741TX, UL 1741TY, UL 1741TZ, UL 1741UA, UL 1741UB, UL 1741UC, UL 1741UD, UL 1741UE, UL 1741UF, UL 1741UG, UL 1741UH, UL 1741UI, UL 1741UJ, UL 1741UK, UL 1741UL, UL 1741UM, UL 1741UN, UL 1741UO, UL 1741UP, UL 1741UQ, UL 1741UR, UL 1741US, UL 1741UT, UL 1741UU, UL 1741UV, UL 1741UW, UL 1741UX, UL 1741UY, UL 1741UZ, UL 1741VA, UL 1741VB, UL 1741VC, UL 1741VD, UL 1741VE, UL 1741VF, UL 1741VG, UL 1741VH, UL 1741VI, UL 1741VJ, UL 1741VK, UL 1741VL, UL 1741VM, UL 1741VN, UL 1741VO, UL 1741VP, UL 1741VQ, UL 1741VR, UL 1741VS, UL 1741VT, UL 1741VU, UL 1741VV, UL 1741VW, UL 1741VX, UL 1741VY, UL 1741VZ, UL 1741WA, UL 1741WB, UL 1741WC, UL 1741WD, UL 1741WE, UL 1741WF, UL 1741WG, UL 1741WH, UL 1741WI, UL 1741WJ, UL 1741WK, UL 1741WL, UL 1741WM, UL 1741WN, UL 1741WO, UL 1741WP, UL 1741WQ, UL 1741WR, UL 1741WS, UL 1741WT, UL 1741WU, UL 1741WV, UL 1741WW, UL 1741WX, UL 1741WY, UL 1741WZ, UL 1741XA, UL 1741XB, UL 1741XC, UL 1741XD, UL 1741XE, UL 1741XF, UL 1741XG, UL 1741XH, UL 1741XI, UL 1741XJ, UL 1741XK, UL 1741XL, UL 1741XM, UL 1741XN, UL 1741XO, UL 1741XP, UL 1741XQ, UL 1741XR, UL 1741XS, UL 1741XT, UL 1741XU, UL 1741XV, UL 1741XW, UL 1741XX, UL 1741XY, UL 1741XZ, UL 1741YA, UL 1741YB, UL 1741YC, UL 1741YD, UL 1741YE, UL 1741YF, UL 1741YG, UL 1741YH, UL 1741YI, UL 1741YJ, UL 1741YK, UL 1741YL, UL 1741YM, UL 1741YN, UL 1741YO, UL 1741YP, UL 1741YQ, UL 1741YR, UL 1741YS, UL 1741YT, UL 1741YU, UL 1741YV, UL 1741YW, UL 1741YX, UL 1741YY, UL 1741YZ, UL 1741ZA, UL 1741ZB, UL 1741ZC, UL 1741ZD, UL 1741ZE, UL 1741ZF, UL 1741ZG, UL 1741ZH, UL 1741ZI, UL 1741ZJ, UL 1741ZK, UL 1741ZL, UL 1741ZM, UL 1741ZN, UL 1741ZO, UL 1741ZP, UL 1741ZQ, UL 1741ZR, UL 1741ZS, UL 1741ZT, UL 1741ZU, UL 1741ZV, UL 1741ZW, UL 1741ZX, UL 1741ZY, UL 1741ZZ


بازگشت
تماس با پشتیبانی


Efficiency	
Max. Efficiency	≥ 99.0%
European Efficiency	≥ 98.8%
Input	
Max. Input Voltage	1,500 V
Number of MPPT	6
Max. Current per MPPT	65 A
Max. Short Circuit Current per MPPT	115 A
Max. PV Inputs per MPPT	4/5/5/4/5/5
Start Voltage	550 V
MPPT Operating Voltage Range	500 V ~ 1,500 V
Nominal Input Voltage	1,080 V
Output	
Nominal AC Active Power	275,000 W
Max. AC Apparent Power	330,000 VA
Max. AC Active Power (cosφ=1)	330,000 W
Nominal Output Voltage	800 V, 3W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	198.5 A
Max. Output Current	240.3 A
Adjustable Power Factor Range	0.8 LG ... 0.8 LD
Total Harmonic Distortion	THD < 1% (Rated)
Protection	
Smart String-level Disconnection (SSLD)	Yes
Smart Connector-level Detection (SCLD)	Yes
AC Overcurrent Protection	Yes
DC Reverse-polarity Protection	Yes
PV-array String Fault Detection	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
DC Insulation Resistance Detection	Yes
Residual Current Detection Unit	Yes
Communication	
Display	LED Indicators, WLAN + APP
USB	Yes
MBUS	Yes
RS485	Yes
General	
Dimensions (W x H x D)	1,040 x 752 x 395 mm
Weight (with mounting plate)	≤ 112 kg
Operating Temperature Range	-25°C ~ 60°C
Cooling Method	Smart Air Cooling
Max. Operating Altitude without Derating	4,900 m
Relative Humidity	0 ~ 100% (Non-condensing)
DC Connector	HH45MM4TMSPA / HH45PM4TMSPA
AC Connector	Support DT / DT Terminal (Max. 400 mm ²)
Protection Degree	IP 66
Anti-corrosion Protection	C5-Medium
Topology	Transformerless
Standards Compliance	
IEC 62109-1/-2, IEC 62520, IEC 60947-2, EN 50549-2, IEC 61683, etc.	


بازگشت
تماس با پشتیبانی




باتری LFP

برند مورد نظر را انتخاب کنید

GROWATT ▶

DYNESS ▶



بازگشت

تماس با پشتیبانی



باتری LFP GROWATT

مدل مورد نظر را انتخاب کنید



HOPE 5.0L-B1



HOPE 5.0LW-B1



HOPE 16.0LM-A1



بازگشت

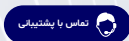
تماس با پشتیبانی





Datasheet	Hope 5.0L-B1
Battery data	
Nominal voltage	51.2V
Rated capacity	5.12kWh
Usable capacity	5.0kWh
Operating voltage	40 - 58.4V
Max. discharging current	180A
Peak discharging current	258A/150ms
Max charging current	180A
General data	
Dimension (W/D/H)	440/480/138.5mm
Weight	42±2kg
IP protection	IP30
Charge temperature	0°C~+55°C
Discharge temperature	-20°C~+55°C
Features	
DOD	98%
Cycle life	>6000 (25°C, 0.3C)
Fast-charge connection	Max.48 packs
Communication port	CAN/RS485
Warranty	5 Years
CE,EMC, UN 38.3, MSD, RoHS	

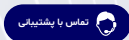
*Nominal charge/discharge current and power density will occur related to Temperature and SOC





Datasheet		HOPE 16.0LM-A1
System data		
Battery type		LiFePO4
Nominal voltage		51.2V
Nominal capacity		160Ah
Usable capacity		15.36Ah
Operating voltage		40-58.4V
Max. Charge/Discharge current		118A/200A
Peak charging/discharging current		700A/200 us
DOB		Yes
General		
Dimension(W*H*D)		440*194*205mm
Weight		120x12kg
Installation		Top-standing
Altitude		$+3000\text{m}$
IP Protection		IP20
Operating temperature		Chg: 0~45°C; Dis: -20~+45°C
Storage temperature*		+30~+45°C
Features		
Cycle life		4800 cycles @05-090, @25°C
Cooling		Natural convection
System connection		Max. 40 pins in parallel
Communication port		CAN/RS485
Warranty System / 10 years		Yes / Optional

©2024 GROWATT, INC. ALL RIGHTS RESERVED



باتری LFP DYNES

مدل مورد نظر را انتخاب کنید



DL5.0C PRO



POWERBRICK 14.3



بازگشت

تماس با پشتیبانی



DYNES

Model	DLS0C Pro
Battery Type	LiFePO ₄
Nominal Battery Energy	512kWh
Nominal Capacity	100Ah
Nominal Voltage	512V
Operating Voltage	44.8-516V
Recommended Charge & Discharge C Rate	0.5C
Maximum Discharge C Rate	1C
Recommended Charge/Discharge Current	50A
Max. Charge/Discharge Current	Charge 75A, Discharge 100A
Peak Discharge Current	100A@10min
Depth of Discharge (DOD)	95%
Net Weight	48kg
Dimension (R/D/H)	480/165/150mm
Charging Temp. Range	0-55°C/-20-55°C (with heating function)
Discharging Temp. Range	-20-55°C
Communication	CAN/RS485
BMS Module	Built-in BMS module, APP OTA function
Cycle Life*	>6000 Cycles
Protection Level	IP20
Active fire protection system	Optional Aerosol fire extinguisher
Expansion	Up to 50 units in parallel
Plus	Can be used in both off-grid and hybrid setups, compact design
Certification & Safety Standard	UN38.3/CE-EMC/IEC60320/IEC-60321
Compatible Inverters	SMA/Solarwiser/Victor energy/egon/sonnens/duo/Goodway/Growatt/Solarmax/Support DEHN/APPsystem etc.



بازگشت

تماس با پشتیبانی



DYNES

Model	PowerBrick
Battery Type	LiFePO ₄
Nominal Battery Energy	14.33kWh
Nominal Voltage/Capacity	51.2V/280Ah
Recommended Charge/Discharge Current	140A (0.5C)
Max. Charge Current	200A
Max. Discharge Current	200A
Depth of Discharge	85%
Communication	CAN/RS485
Cycle Life *	Unlimited cycles / 10 Years
Protection Level	IP20
Net Weight	114kg
Dimension(W/D/H)	435/335/657mm (No wall-mounted bracket)
Maximum Parallel Modules	50
Charging Temp. Range	0-55°C
Discharging Temp. Range	-20-95°C
WiFi Module	Built-in WiFi module, APP OTA function
Fire Protection System	Optional Aerosol fire extinguisher
Certification & Safety Standard	UN38.3/CE-EMC/IEC60909/GOST-R
Compatible Inverters	SMA/Schneider/Watson energy/Ingenium/Sola/GoodWe/Crowat/Solaris/CPA/SA/DEYE, etc.



بازگشت

تماس با پشتیبانی



حسگر سنجش کارایی



NV-SMC01

مشاهده اطلاعات



بازگشت

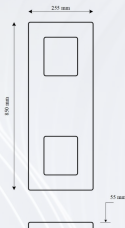
تماس با پشتیبانی



- ابزاری دقیق برای اندازه‌گیری کاهش راندمان پنل‌های خورشیدی به دلیل گرد و غبار
- طراحی بومی با قابلیت مقایسه پنل مرجع تمیز و پنل آلوده
- دارای پاک‌سازی خودکار سلول مرجع، اتصال Wi-Fi و RS-485
- نصب سریع و عملکرد پایدار در نیروگاه‌های خورشیدی

SPECIFICATIONS

Soiling Measurements	<ul style="list-style-type: none"> • Daily soiling loss (% of daily insolation loss) • Soiling rate (moving average, % loss/day) • Soiling ratio (IEC standard 61724-1) • Transmission loss (% instantaneous)
Irradiance	0 - 2000 W/m ² , ±0.5%, temperature correction
Power and Battery	Solar powered, 3000 mAh extended temperature Lithium-Ion chemistry
Data Connection	Modbus RTU (over RS-485)
Data Retrieval	WiFi (Password Protected), Modbus (Micro SD Archiving Available for 10 Years)
Reference Cell	Polycrystalline cell, solar glass with standard ARC coating, white backsheet, EVA encapsulant
Self-Calibration	Easy 1x/year, on-site, OTA or local Modbus. No off-site lab calibration required.
Mechanical Load Rating	+/- 2400 Pa for wind +5400 Pa for snow loading
Enclosure IP Rating	IP66
Cleaning System	1x SS spray nozzles, 60psi max, 100 Ltr. reservoir with pump available (Wash Extension accessory)
Mounting Holes	(6) 1/4"-20 brass inserts
Dimensions	850 x 255 x 55 mm (L x H x D)
Weight	15 kg
Electronic Temp. Range	-20°C to +75°C
Warranty	3 Years
Accessories	<ul style="list-style-type: none"> • Wash Extension with Tank Level Sensor • Purlin Bracket Kit



- جلوگیری از افت راندمان ۴۰ درصدی پنل‌ها در اثر آلودگی
- افزایش عمر اقتصادی و کاهش فرسایش سطحی پنل‌ها با تعیین زمان بهینه شست‌وشو
- مدیریت هوشمند نگهداری نیروگاه‌های خورشیدی، با ثبت و تحلیل داده‌های تولیدی
- مناسب برای پروژه‌های صنعتی، مگاواتی و پژوهشی
- عملکرد دقیق، قابل اعتماد و منطبق با استاندارد IEC724-1

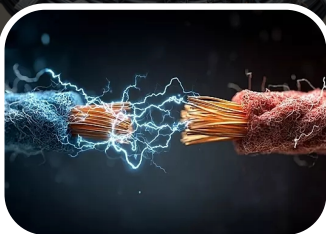


بازگشت

تماس با پشتیبانی



کابل های DC



JINQISOLAR

مشاهده اطلاعات



بازگشت

تماس با پشتیبانی



کابل JINQISOLAR

مدل مورد نظر را انتخاب کنید



JINQISOLAR 1x4mm² >



JINQISOLAR 1x6mm² >



بازگشت

تماس با پشتیبانی



IEC 62930 1x4.0 mm² DC 1500V XLPO/XLPO

Conductor	Stranded tinned copper (IEC 60228 Class 5) 56/0.28mm (min)0.27mm (max)0.28mm
Stranded OD	3.48 mm
Insulation	Halogen free crosslinked polyolefin Color: black
ID	4.0±0.15mm
Sheath	Halogen free crosslinked polyolefin Color: black/Red
OD	5.7±0.2mm
Marking	TÜV SÜD IEC62930 62930 IEC 131 1x4mm ² DC1500V HALOGEN FREE LOW SMOKE JNGI SOLAR PTE. LTD. B 132888

1x4.0 mm² SOLAR DC CABLE

Maximum resistance of conductor at 20°C	≤5.8Ω/KM
Insulation resistance at 20°C	≥700 MΩ·Km
Insulation resistance at 90°C	≥0.700MΩ·Km
Voltage test of finished cable	AC 6.5KV 5min, No break
DC Voltage test of insulation	1800V, 240h (85°C, 10g/LNaCl) No break
Tensile strength of insulation	≥8Mpa
Elongation of insulation	≥125%
Tensile strength of sheath	≥8Mpa
Elongation of sheath	≥125%
Shrinkage resistant	≤2%
Acid and alkali resistant	IEC60811-404
Ozone resistant	IEC60811-403/EN60396-8.1.3
UV resistant	IEC 62930-Annex E
Dynamic penetrate force	IEC 62930-Annex D
-40°C, 16h) Winding at low temperature	IEC 60811-504
-40°C, 16h) Impact at low temperature	IEC 60811-506
Fire performance	IEC60332-1-2
Clad Br Content	IEC 62930
Thermal endurance Test	IEC 60216-1, IEC 60216-2, T1120

Halogen Free Cable For Photovoltaic Equipment

Solar Application

Rating voltage	IEC-DC1500V
Working temperature	-40~90°C
Max. conductor temperature	120°C
Short circuit temperature	250°C @ 60
Bending radius	6xD
Life Period	≥25 years

Current Rating Ambient Temperature: 30°C

Installation Method	Free in air	On surface without opposite contact	On surface without opposite contact
Current rating	57A	54A	45A



بازگشت

تماس با پشتیبانی



IEC 62930 1x6.0 mm² DC 1500V XLPO/XLPO

Conductor	Stranded tinned copper (IEC 60228 Class 5) 84/0.25mm (nix0.27mm max0.29mm)
Stranded OD	2.95 mm
Insulation	Halogen free crosslinked polyolefin Color: Black
ID	4.6±0.15mm
Sheath	Halogen free crosslinked polyolefin Color: Black/Red
OD	6.3±0.2mm
Marking	TÜV SÜD IEC62930 62930 IEC 131 1x6mm ² DC1500V HALOGEN FREE LOW SMOKE JNGC SOLAR PTE. LTD. B 132886

1x6.0 mm² SOLAR DC CABLE

Maximum resistance of conductor at 20°C	≤3.280/KM
Insulation resistance at 20°C	≥810 MΩ·Km
Insulation resistance at 90°C	≥0.810 MΩ·Km
Voltage test of finished cable	AC 6.5KV 5min, No break
DC voltage test of insulation	1500V, 240h (95°C, 10g/LNaCl) No break
Tensile strength of insulation	≥8Mpa
elongation of insulation	≥125%
Tensile strength of sheath	≥8Mpa
elongation of sheath	≥125%
Shrinkage resistant	≤2%
Acid and alkali resistant	IEC60811-404
Ozone resistant	IEC60811-403/EN50288-6.1.3
UV resistant	IEC 62930-Annex E
Dynamic penetrate force	IEC 62930-Annex D
-40°C, 16h) Winding at low temperature	IEC 60811-554
-40°C, 16h) Impact at low temperature	IEC 60811-556
Fire performance	IEC60332-1-2
Cland Br Content	IEC 62930
Thermal endurance Test	IEC 60216-1, IEC 60216-2, TH30

Halogen Free Cable For Photovoltaic Equipment

Solar Application

Rating voltage	IEC :DC1500V
Working temperature	-40~90°C
Max. conductor temperature	120°C
Short circuit temperature	250°C @ 5S
Bending radius	6xD
Life Period	≥25 years

Current Rating Ambient Temperature: 30°C

Installation Method	Free in air	On surface without opposite contact	On surface without opposite contact
Current rating	75A	69A	59A

Approval: IEC62930

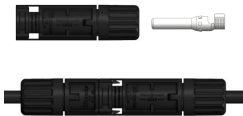


بازگشت

تماس با پشتیبانی



کانکتور



Trinasolar

مشاهده اطلاعات



بازگشت

تماس با پشتیبانی



TS4 Plus Connector Specifications

Product Name	TS4 Plus
Certified name	TS4-cd (c=1; d=1 or 2)
Rated voltage	IEC 1500V&UL 1500V
Rated current @IEC (85°C)	41A (4.0mm ² / 12AWG) 46A (6.0mm ² / 10AWG)
Rated impulse voltage	16KV
Ambient temperature range	-40°C ~ +85°C
Contact resistance	≤0.5mΩ
Application degree	Class A
Protection class	Class II
Pollution degree	2
Degree of protection	IP68 (1m, 1h) mated IP2X unmated
Flame class	UL94-V0
Insulation material	m-PPE/PA
Contact material	Copper, Tin-plated
Type of termination	Crimping
Locking system(UL)	Locking type
TUV,IEC62852	R50508240/R50385924
UL,UL6703	E486009

Product Selection Form

Type	P/N	Cable OD mm	Conductor Cross Section		Tool P/N		
			mm ²	AWG	Wire Stripper P/N	Rivet Plier P/N	Spanner P/N
TS4 Plus-F1	7A004669	4.7-6.0	4.0/6.0	12/10	7A001039	7A001038	7A004541
TS4 Plus-M1	7A004670						
TS4 Plus-F2	7A004671	5.6-6.8	4.0/6.0	12/10	7A001039	7A001038	7A004541
TS4 Plus-M2	7A004672						
TS4 Plus-F3	7A004673	6.0-7.2	4.0/6.0	12/10	7A001039	7A001038	7A004541
TS4 Plus-M3	7A004674						



بازگشت

تماس با پشتیبانی



استراچر



FIXED BRACKET

مشاهده اطلاعات



بازگشت

تماس با پشتیبانی





Easy Adjustment

- **Push-Rod Operation - Quick Locking.** Ground push-rod operation allows fast adjustment and reliable locking.



Stable Structure

- **Triangular Locking - Superior Wind Resistance.** Triangular stable structure provides wind resistance comparable to fixed mounts.



Reliable Locking

- **Pin Fastening - No Loosening Risk.** Mechanical pin locking ensures no loosening.



Easy Operation & Maintenance

- **Durable - Low Maintenance.** Simple and durable design reduces O&M costs.

System Parameters

Tracking Type	2X14
Tilt Adjustment Range	15°-50°
Drive Type / Quantity	4 Push Rods
Protection Strategy	E-W: 5° (max); N-S: Unrestricted
Foundation Options	PHC pile
Structural Materials	Hot dipped galvanized/ZAM high-strength steel
Design Wind Load	0.42KN/m ² 25years
Design Snow Load	0.46KN/m ² 25years
Module Compatibility	Compatible with all types of module



بازگشت

تماس با پشتیبانی





solis

پست کمپکت

مدل مورد نظر را انتخاب کنید



Solis-6500-MV



Solis-4550-MV



Solis-9100-MV



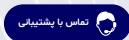
بازگشت

تماس با پشتیبانی



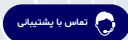
DATASHEET
Solis-6500-MV

Models	Solis-6500-MV
CB specification	
MCCB specification	400 A / 800 Vac / 30 / 10 + 2 poles
ACB specification	3200 A / 800 Vac / 30 / 1 + 2 poles
Connection form with transformer	Copper busbar
Transformer	
Transformer type	Oil immersed
Rated output power	4000 kVA @ 40°C
Max. output power	7000 kVA @ 30°C
220V voltage	24.9V / 10 - 30.9V
Max. input current	2526 A x 2
Tapping on HV	±2 + 2.5%
Vector group	Dy11y11
Frequency	50 Hz / 60 Hz
Cooling type	ONAN
Impedance	8% (x 10%)
Oil type	Mineral oil (Optional: plant oil)
Winding material	Al / Al (Optional: Cu / Cu)
Insulation class	A
Connection form with MV switchgear	Cable
MV switchgear	
Type of insulate	SF ₆ (Optional: SF ₆ -Free)
Rated voltage	12 - 40.5 kV
Rated current	4000A
Internal arcing fault	20 kA / 1 s
Qty of feeder	3 feeders
Protection	
DF surge protection	AC type1 + 2
AC input protection	Circuit breaker
Transformer protection	Oil temperature, oil level, oil pressure
Fire protection	Smoke detection, emergency lighting
General data	
Dimensions (W x H x D)	6050 x 2095 x 2430 mm
Approximate weight	21 T
Operating ambient temperature range	-25 - +40°C
Max. operation altitude	2000 m
Auxiliary power supply	5 kVA / 230 V (Optional: max. 50 kVA)
UPS	1 kVA 30 min (Optional: max. 2 kVA 2h)
Degree of protection	IP54
Anti-corrosion Class	C4-H (Optional: C5-M)
Allowable relative humidity range	0 - 95%
Communication	RS485, Ethernet, Optical fiber
Compliance	IEC 60271, IEC 62271, IEC61439



DATASHEET
Solis-4550-MV

Models	Solis-4550-MV
LT panel	
MCCB specification	400A / 100Isec / 3P, 34 pcs
RCB specification	4000A / 180Isec / 3P, 1 pcs
Connection form with transformer	Copper busbar
Transformer	
Transformer type	Oil immersed
Rated output power	4550 kVA @ 40°C
Max. output power	4900 kVA @ 30°C
DMV voltage	0.8 kV / 38 - 35 kV
Max. input current	3500 A
Tapping in MV	12 × 2.5%
Rectifier group	Dy11
Frequency	50 Hz / 60 Hz
Cooling type	ONAN
Impedance	9% (x 0.5%)
Oil type	Mineral oil (Optional plant oil)
Winding material	Al / Al (Optional: Cu / Cu)
Insulation class	A
Connection form with MV switchgear	Cable
MV switchgear	
Type of insulate	SF6 (Optional: SF6-Free)
Rated voltage	12 - 40.5 kV
Rated current	630 A
Internal arcing fault	20 kA / 1 s
Qty of breaker	3 breakers
Protection	
LT surge protection	AC type1 + II
RC input protection	Circuit breaker
Transformer protection	Oil temperature, oil level, oil pressure
Fire protection	Smoke detection, emergency lighting
General Data	
Dimensions (W*H*D)	800 × 2800 × 2400 mm
Approximate weight	35.6 T
Operating ambient temperature range	-25 - 40°C
Max. operation altitude	2000m
Auxiliary power supply	5 kVA / 220 V (Optional: max. 50 kVA)
UPS	1.0kW 30min (Optional: max. 2.0kW 2h)
Degree of protection	IP54
Anti-corrosion Class	C4-M (Optional: C5-M)
Allowable relative humidity range	5 - 95%
Communication	RS485, Ethernet, Optical fiber
Compliance	IEC 60076, IEC 62271, IEC 61439



DATASHEET
Solis-9100-MV

Models	Solis-9100-MV
IP panel	
HCC specification	400 A / 380V ac / 3P, 3L + 2 pcs
ADB specification	4000 A / 800V ac / 3P, 1 + 2 pcs
Connection form with transformer	Copper busbar
Transformer	
Transformer type	Oil immersed
Rated output power	3300 kW @ 40°C
Max. output power	8800 kW @ 30°C
LV / MV voltage	0.69 kV / 10 - 35 kV
Max. input current	3500 A + 2
Tapping on MV	±2 + 2.5%
Vector group	Dy11y0
Frequency	50 Hz / 60 Hz
Cooling type	ONAN
Impedance	9.5% (±0.2%)
Oil type	Mineral oil (Optional plant oil)
Winding material	Al / Al (Optional: Cu / Cu)
Insulation class	F
Connection form with MV switchgear	Cable
MB bush/gear	
Type of insulator	SFG (Optional: SF6-Free)
Rated voltage	12 - 48.5 kV
Rated current	630 kA
Internal arcing level	20 kA / 1 s
Qty of feeder	2 feeders
Protection	
UV surge protection	AC type I + II
AC input protection	Circuit breaker
Transformer protection	Oil temperature, oil level, oil pressure
Fire protection	Smoke detector, emergency lighting
General Data	
Dimensions (W x H x D)	6000 x 2800 x 2400 mm
Approximate weight	23.5 T
Operating ambient temperature range	-25 ~ +60°C
Max. operation altitude	2000 m
Auxiliary power supply	5 kW / 230V (Optional: max. 50 kW)
UPS	1.68 A, 30 min (Optional: max. 2 kW, 2h)
Degree of protection	IP54
Atmosphere Class	C4-H (Optional: C4-M)
Allowable relative humidity range	0 - 95%
Communication	RS485, Ethernet, Optical fiber
Compliance	IEC 60876, IEC 62211, IEC 61439


بازگشت
تماس با پشتیبانی




دفتر مرکزی: تهران، خیابان دولت، پلاک ۳۰۸، ساختمان پارامیس، واحد ۲۰۳، ۳۰۴، ۶۰۴
واحد R&D: تهران، نارمک، خیابان شهید ملک لو، خیابان شهید حیرخانی، دانشگاه علم و صنعت



دفتر مرکزی: ۰۲۱-۲۱۰۰۰۴۷۷
واحد R&D: ۰۲۱-۷۳۲۲۵۶۱۳



Info@noura-tech.com

استعلام و سفارش گذاری خرید



بازگشت



توجه

در صورت غیر فعال بودن دکمه‌ها در سیستم عامل اندروید،
حتما اپلیکیشن GoogleDrive خود را به روزرسانی نمایید.

If the buttons are disabled in the Android system,
Be sure to update your Google Drive app.

زبان مورد نظرتان را انتخاب نمایید:

Select **your language**:

فارسی



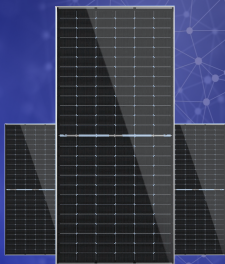
English



شروع

A large, white, circular button with a subtle 3D effect and a drop shadow, containing the word "START" in a bold, black, sans-serif font. The button is positioned in the center of the image, overlapping the field of yellow flowers.

START



| About Us



| Products



| Contact Us



Digi-Catalog / 2026



Pishgaman Energy Nouratech Company, relying on expert human capital and the support of prominent professors from the country's leading universities, is a specialized reference for supplying and providing solar energy equipment and products in the country. Nouratech, with the design, consulting, and implementation of more than 38 MW of solar power plant projects, as well as the supply and distribution of more than 290 MW of solar panels and 210 MW of inverters from reputable global brands, is among the largest suppliers of solar energy equipment in the country and offers high-efficiency, dedicated solutions for various industries, numerous businesses, residential and office complexes and houses, villas, etc.

- Design, consulting and implementation of solar power plants (EPC)
- Supply of equipment: various types of panels, inverters, structures and lithium batteries
- Design and implementation of On-Grid, Off-Grid and hybrid systems supervision, and complete commissioning of projects



38 MW

Volume of photovoltaic power plant projects



210 MW

Supply and sales volume of various inverters



290 MW

Solar panel supply and sales volume

[Key Persons](#)

[Back](#)

[Awards and certificates](#)

[Business partners](#)



NouraTech, in pursuing its objectives in the fields of energy, technology, and sustainable infrastructure development, is proud to cooperate with some of the most reputable organizations and companies in the country. Strategic collaborations with institutions such as SATBA (Renewable Energy and Energy Efficiency Organization of Iran), SATKA (Association of Manufacturers and Suppliers of Renewable Energy Products and Services) and Goldiran Logistics Company have played a significant role in enhancing service quality, expanding the supply network, and accelerating project execution. NouraTech regards these partnerships as a valuable asset and continuously seeks to develop these relationships based on mutual trust, accountability, and the creation of shared value.

[Back](#)



Back



CEO: Hessem Kazari

PhD, Electrical Power Engineering, Sharif University of Technology

Faculty member, Iran University of Science and Technology

Visiting Researcher, Imperial College London

Founder, shareholder and consultant of 3 knowledge-based companies (in the electricity and energy industry)

Chairman of the Board: Hamed Najafi

PhD in Economics, Allameh Tabatabaei University

Lecturer, Faculty of Management, University of Tehran

Founder, CEO and shareholder of Mabna Company

Owner and operator of a 14 MW solar power plant in the Payam Special Economic Zone

Vice Chairman of the Board: Abbass KhaleghiTabar

DBA, University of Tehran

Director of Planning, Trade Development Organization Of Iran

CEO, Business Training Center of IMI Ministry of Iran

President, University of Applied Sciences and Technology, Commerce Branch

Director, DBA Program, University of Tehran



Back

Board Member: Fatemeh Seyyed Salehi

PhD, Artificial Intelligence, Sharif University of Technology

Visiting Scholar, UC Berkeley

Faculty member, Sharif University of Technology

AI Consultant, MCI Company

AI Consultant, Refah Bank

Sales Manager: Mohammad Mohammadi Ghahroudi

Master of Science in Renewable Energy Engineering

More than 15 years of experience in the field of solar power plants

Designer, More than 800 MW PV PowerPlants

Member of Committee, Iran's PV Regulations standard

Other colleagues:

Cooperation with more than 23 professional managers and experts in the fields of consulting, design, supply, sales, installation, commissioning and after-sales service in the entire chain of solar products and equipment.

A set of navigation icons including a left-pointing arrow, two circles, and a right-pointing arrow.
[Back](#)

Product Selection:



LFP Battery



Inverter



Solar Module



Accessories



DC Cable



Soiling Loss
Measurement



Structure



MV Station



Coming Soon ...



Back

Contact support





Solar Module

Brand Selection:

JinKO Solar



Trinasolar



Back

Contact support



 Jinko Solar

Class Selection:

Utility / 700⁺ W



Industrial / 600⁺ W



Household / 400⁺ W



Back

Contact support



Tiger Bifacial 450-470 Watt

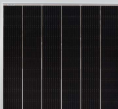
Tiling Ribbon (TR) Technology

Positive power tolerance of 0~+3%

ISO9001:2015, ISO14001:2015, ISO45001:2018 certified factory

IEC61215, IEC61730 certified product

N-Type



KEY FEATURES



TR technology + Half Cell

TR technology with Half cell aims to eliminate the cell gap to increase module efficiency (mono-facial up to 20.65%)



Low Light Induced Degradation

The N-type cell shows extremely low light induced degradation (LID) performance when comparing with the P-type cell.



9BB instead of 5BB

9BB technology decreases the distance between bus bars and finger grid line which is benefit to power increase.



Higher lifetime Power Yield

1% first year degradation,
0.4% linear degradation



Best Warranty

15 year product warranty,
30 year linear power warranty



Better low-light performance

Excellent performance in low-light environments (e.g. early morning, dusk, and cloud, etc.)

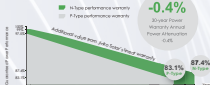


Severe Weather Resilience

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

LINEAR PERFORMANCE WARRANTY

15 Year Product Warranty 30 Year Linear Power Warranty
0.4% Annual Degradation Over 30 years

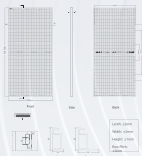


Back

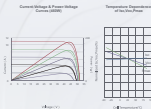
Technical Specifications

Jinko Solar

Engineering Drawings



Electrical Performance & Temperature Dependence



Packaging Configuration

(Two panels = One stack)

800pcs/pallets, 800pcs/stack, 600pcs/ 40HQ Container

Mechanical Characteristics

Cell Type	N type Mono-crystalline
Number of cells	196 (2x7x7)
Dimensions	2225±10(2)×1325±10(2)×45(±0.6)±1.08 (mm)
Weight front	25.0 kg (55.12 lbs)
Glass	3.2mm, Anti-Reflection Coating, High Transmittance, Low Iron, Tempered Glass
Frame	Robust Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	3x22 T4.0 (2mm) (-): 2500mm, (+): 1500 mm or Customized Length

SPECIFICATIONS

Module Type	JKM450N-TRL3-TV		JKM450W-TRL3-TV		JKM450N-TRL3-TV		JKM450W-TRL3-TV	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	4300Wp	3200Wp	4300Wp	3200Wp	4300Wp	3200Wp	4300Wp	3200Wp
Maximum Power Voltage (Vmp)	43.60V	40.02V	43.60V	40.10V	43.60V	40.20V	43.60V	40.47V
Maximum Power Current (Imp)	10.35A	8.28A	10.08A	8.05A	10.35A	8.05A	10.35A	8.05A
Open-circuit Voltage (Voc)	51.70V	48.80V	51.80V	48.80V	51.80V	48.90V	52.00V	49.10V
Short-circuit Current (Isc)	11.01A	8.96A	11.16A	9.01A	11.26A	9.26A	11.36A	9.23A
Module Efficiency STC (%)	19.78%	20.00%	20.21%	20.21%	20.21%	20.42%	20.48%	20.48%
Operating Temperature(°C)			-40°C~+85°C					
Maximum system voltage			1000V DC (60C)					
Maximum series fuse rating			25A					
Power tolerance			0~+3%					
Temperature coefficient of Pmax			-0.34%/°C					
Temperature coefficient of Voc			-0.23%/°C					
Temperature coefficient of Isc			0.048%/°C					
Nominal operating cell temperature (NOCT)			45±2°C					
Refer: Bifacial Factor			80±5%					

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

		4700Wp	4780Wp	4820Wp	4880Wp	4940Wp
8%	Maximum Power (Pmax)	4700Wp	4780Wp	4820Wp	4880Wp	4940Wp
	Module Efficiency STC (%)	20.76%	20.88%	21.22%	21.46%	21.68%
18%	Maximum Power (Pmax)	5180Wp	5230Wp	5290Wp	5360Wp	5470Wp
	Module Efficiency STC (%)	22.14%	22.88%	23.28%	23.75%	24.15%
30%	Maximum Power (Pmax)	5850Wp	6020Wp	6090Wp	6200Wp	6190Wp
	Module Efficiency STC (%)	24.71%	25.88%	26.28%	26.88%	26.65%

* STC: ☀️ Irradiance 1000W/m² 🌡️ Cell Temperature 25°C ☁️ AM=1.5
 NOCT: ☀️ Irradiance 800W/m² 🌡️ Ambient Temperature 20°C ☁️ AM=1.5 🌪️ Wind Speed 1m/s

Power measurement tolerance: ± 3%

The company reserves the final right for explanation on any of the information presented hereby. TR-JKM450-470N-TRL3-TV-A1-1-G1



Back

Contact support



Jinko Solar TIGER Neo



66HL4M-BDV

605-630 Watt

BIFACIAL MODULE WITH DUAL GLASS

N-type



N-type Technology

N-Type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LETFID degradation and better low light performance.



HOT 3.0 Technology

N-type modules with JinkoSolar's HOT 3.0 technology offer better reliability and efficiency.



Dual-Sided Power Generation

Dual-sided power generation gain increases with backside exposure to light, significantly reducing LCOE.



Mechanical Load Enhanced

Certified to withstand:
5400 Pa front side max static test load
2400 Pa rear side max static test load



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



Anti-PID Guarantee

Minimizes the chance of degradation caused by PID phenomena through optimization of cell production technology and material control.



12 Year | 30 Year | 1% | 0.40%
Power Output | Power Output | Power Output | Power Output

- IEC61215:2021 / IEC61730:2023
- IEC61731 / IEC62716 / IEC60868 / IEC62884
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



JKM605-630N-66HL4M-BDV-F3-EN



Back

Technical Specifications

Mechanical Characteristics

Cell Type	N-type Mono-crystalline
No. of cells	132 (6x22)
Dimensions	2392 × 1134 × 30 mm
Weight	32.4 kg
Front Glass	2.8 mm, Anti-reflection Coating
Back Glass	2.8 mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Protection Class	Class II
IEC Fire Type	Class C
Connector Type	M03M/MC4/Others
Output Cables	4.0 mm ² (+) 490 mm, (-) 208 mm or Customized Length

Packaging Configuration

Pallet Dimensions	2396 × 1118 × 1253 mm
Packing Detail	36 pcs/pallets, 72 pcs/stack, 720 pcs/40'HQ Container

Specifications (STC)

Maximum Power - P _{max} [Wp]	665	610	615	628	625	630
Maximum Power Voltage - V _{mp} [V]	48.31	48.46	48.60	48.74	48.83	48.92
Maximum Power Current - I _{mp} [A]	15.81	15.08	15.15	15.22	15.29	15.36
Open-circuit Voltage - V _{oc} [V]	48.48	48.68	48.88	49.08	49.28	49.48
Short-circuit Current - I _{sc} [A]	15.90	15.96	16.02	16.08	16.14	16.20
Module Efficiency STC (%)	22.40	22.58	22.77	22.95	23.14	23.32
Power Tolerance	0 ~ +3%					
Temperature Coefficients of P _{max}	-0.29 %/°C					
Temperature Coefficients of V _{oc}	-0.25 %/°C					
Temperature Coefficients of I _{sc}	0.045 %/°C					

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5

Specifications (BNP)

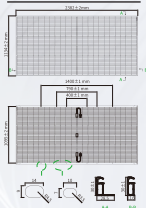
Maximum Power - P _{max} [Wp]	668	674	679	685	690	696
Maximum Power Voltage - V _{mp} [V]	48.29	48.46	48.59	48.75	48.88	49.04
Maximum Power Current - I _{mp} [A]	16.58	16.95	16.73	16.81	16.83	16.95
Open-circuit Voltage - V _{oc} [V]	48.46	48.66	48.86	49.06	49.26	49.46
Short-circuit Current - I _{sc} [A]	17.56	17.64	17.70	17.77	17.83	17.90

BNP: Irradiance from 1000W/m², near 1200W/m², Cell Temperature 25°C, AM=1.5

Application Conditions

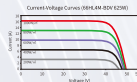
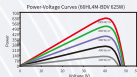
Operating Temperature	-40 °C ~ +70 °C
Maximum System Voltage	1500 VDC (IEC)
Maximum Series Fuse Rating	35 A
Bifaciality Coefficient	qV _{oc} : 58 ± 3 %, qI _{sc} : 68 ± 3 %, qP _{max} : 80 ± 5 %

Engineering Drawings



Note: For specific dimensions and tolerances, please refer to the corresponding detailed module drawings.

Electrical Performance

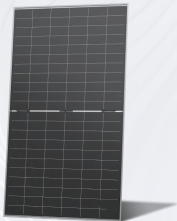


Back

Contact support



Jinko Solar TIGER Neo



66HL5-BDV

710-735 Watt

BIFACIAL MODULE WITH DUAL GLASS

N-type



N-type Technology

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LeTID degradation and better low light performance.



HOT 3.0 Technology

N-type modules with JinkoSolar's HOT 3.0 technology offer better reliability and efficiency.



Dual-Sided Power Generation

Dual-sided power generation gain increases with backside exposure to light, significantly reducing LCOE.



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



Mechanical Load Enhanced

Certified to withstand:
5400 Pa front side max static test load
2400 Pa rear side max static test load



Anti-PID Guarantee

Minimizes the chance of degradation caused by PID phenomena through optimization of cell production technology and material control.



12 Year Powermax | 30 Year Lifetime | 1% Degradation | 0.40% Power Loss

- IEC61215-2022 / IEC61730-2025
- IEC61701 / IEC62136 / ISO8068 / IEC62894
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



JKM710-735N-66HL5-BDV-Z3-EN



Back

Technical Specifications

Mechanical Characteristics

Cell Type	Pi-type Mono-crystalline
No. of cells	132 (66×2)
Dimensions	2384 × 1303 × 33 mm
Weight	22.5 kg
Front Glass	2.0 mm, Anti-Reflection Coating
Back Glass	2.0 mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Protection Class	Class II
IEC Fire Type	Class C
Connector Type	JK33M/JK33M2/Others*
Output Cables (Including Connector)	4.0 mm ² [H]-400 mm, [L]-200 mm or Customized Length

*MC4 and MC4-EVO2 available upon request and subject to availability

Packaging Configuration

Pallet Dimensions	1325 × 1123 × 2496 mm
Packing Detail	33 pcs/pallets, 994 pcs/40 HQ Container
(Two pallets = One stack)	

Specifications (STC)

	T30	T35	T20	T25	T30	T35
Maximum Power - Pmax [Wp]	170	175	220	225	230	235
Maximum Power Voltage - Vmp [V]	48.65	48.77	49.89	49.08	49.11	49.23
Maximum Power Current - Imp [A]	3.47	3.54	4.41	4.66	4.76	4.73
Open-circuit Voltage - Voc [V]	48.73	48.88	49.04	49.20	49.36	49.52
Short-circuit Current - Isc [A]	38.53	38.60	48.67	48.74	48.81	48.88
Module Efficiency STC [%]	22.85	23.82	23.18	23.34	23.50	23.66
Power Tolerance	0 ~ +3%					
Temperature Coefficient of Pmax	-0.23%/°C					
Temperature Coefficient of Voc	-0.25%/°C					
Temperature Coefficient of Isc	0.045%/°C					

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM-1.5

Specifications (BNPI)

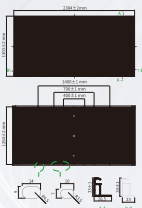
	T84	T90	T85	800	805	810
Maximum Power - Pmax [Wp]	40.68	40.80	49.82	49.03	49.14	49.25
Maximum Power Voltage - Vmp [V]	19.28	19.36	19.43	19.50	19.57	19.64
Maximum Power Current - Imp [A]	2.12	2.11	2.56	2.51	2.52	2.53
Open-circuit Voltage - Voc [V]	19.36	19.44	19.51	19.58	19.65	19.72
Short-circuit Current - Isc [A]	20.48	20.55	26.83	26.71	26.79	26.87

BNPI: Irradiance: front 200W/m², rear 120W/m², Cell Temperature 25°C, AM-1.5

Application Conditions

Operating Temperature	-40 °C ~ +70 °C
Maximum System Voltage	1500 VDC (IEC)
Maximum Series Fuse Rating	35 A
Bifaciality Coefficients	qRsc: 90±5%, qLsc: 80±5%, qPmax: 80±5%

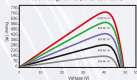
Engineering Drawings



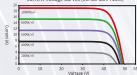
*Note: For specific dimensions and tolerance ranges, please refer to the corresponding detailed module drawings.

Electrical Performance

Power-Voltage Curves (66HL5-BDV T35W)



Current-Voltage Curves (80HL5-BDV T258L)



Back

Contact support





Trinasolar

Class Selection:

Utility / 700⁺ W



Industrial / 600⁺ W



Household / 400⁺ W



Back

Contact support



Vertex S+

DUAL GLASS N type i-TOPCon MODULE

PRODUCT: TSM-NEG9R.2B

POWER RANGE: 425-450 W

450 W

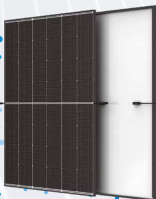
MAXIMUM POWER OUTPUT

0/+5 W

POSITIVE POWER TOLERANCE

22.5%

MAXIMUM EFFICIENCY



Small in size, bigger on power

- Generates up to 450 W, 22.5 % module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping, lower series resistance, improved current collection and enhanced reliability
- Reduces installation cost with higher power bin and efficiency



Dual-glass Design, High Reliability

- Excellent fire rating and resistance to harsh environmental conditions
- 5,400 Pa snow load and 4,000 Pa wind load (test loads)



Maximize Energy Harvest

- Up to 25 years product warranty and 30 years power warranty
- 1 % first-year degradation and 0.4 % annual degradation enabled by N-type technology



Universal solution for residential and C&I rooftops

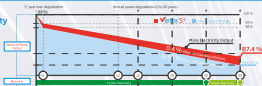
- Designed for compatibility with existing mainstream inverters, optimizers and mounting systems
- Perfect size and low weight for easy handling, optimized transportation cost
- Flexible installation solutions for system deployment

Extended Vertex S+ Warranty

1 %
1st year max degradation

0,4 %
Max. annual degradation from year 2 to 30

25 Years
Product Worked up warranty

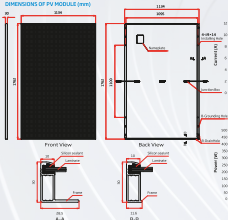


Back

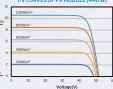
Technical Specifications

Vertex S⁺

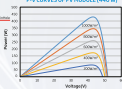
DIMENSIONS OF PV MODULE (mm)



I-V CURVES OF PV MODULE (440 W)



P-V CURVES OF PV MODULE (440 W)



ELECTRICAL DATA (STC)

	TSM-425 600W/120V	TSM-430 660W/120V	TSM-435 660W/120V	TSM-440 660W/120V	TSM-445 660W/120V	TSM-450 660W/120V
Peak Power Watts (P _{max} (W))*	425	430	435	440	445	450
Power Tolerance (P _{max} (W))	±0.5					
Maximum Power Voltage (V _{mp}) (V)	42.9	43.2	43.5	44.8	44.3	44.6
Maximum Power Current (I _{mp}) (A)	9.92	9.96	9.99	20.01	20.00	18.09
Open Circuit Voltage (V _{oc}) (V)	52.9	53.4	53.8	52.2	52.8	52.9
Short Circuit Current (I _{sc}) (A)	10.96	10.99	10.84	26.07	26.71	18.74
Module Efficiency, η _m (%)	21.3	21.5	21.8	22.0	22.3	22.5

*STC includes 1000W/m² irradiance and temperature at 25°C, air mass 1.5. †Maximum irradiance: 1000W/m².

ELECTRICAL DATA (NOCT)

	TSM-425 600W/120V	TSM-430 660W/120V	TSM-435 660W/120V	TSM-440 660W/120V	TSM-445 660W/120V	TSM-450 660W/120V
Maximum Power (P _{max}) (W)	329	328	332	336	339	343
Maximum Power Voltage (V _{mp}) (V)	40.0	40.4	40.7	41.0	41.3	41.8
Maximum Power Current (I _{mp}) (A)	8.09	8.11	8.15	8.17	8.20	8.24
Open Circuit Voltage (V _{oc}) (V)	48.2	48.7	48.1	49.4	48.8	48.1
Short Circuit Current (I _{sc}) (A)	8.51	8.53	8.57	8.60	8.63	8.65

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	244 cells
Module Dimensions	1760×1134×30mm
Weight	21.0kg
Front Glass	3.0mm, High Transmittance, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Back Glass	1.6mm, Heat Strengthened Glass
Frame	30mm Anodized Aluminum Alloy, Black
J-Box	IP68-rated
COE/6	Photovoltaic Technology COE/6 4.0 mm ² Landscape: 1130/1130 mm Portrait: 280/280 mm ²
Connector	TSM-1 IN4 E60*

*See datasheet

TEMPERATURE RATINGS

NOCT (temperature of maximum power)	43°C (±0.5°C)	Operational Temperature Range	-40 to +85 °C
Temperature Coefficient of P _{max}	-0.30 %/K	Maximum System Voltage	1500V _{OC} (IEC)
Temperature Coefficient of I _{sc}	+0.24 %/K	Max. Series Fuse Rating	20A
Temperature Coefficient of V _{oc}	-0.04 %/K		

WARRANTY

25 Year Product Workmanship Warranty
10 Year Power Warranty
1% first year degradation
0.4 % Annual Power Attenuation

PACKAGING CONFIGURATION

Modules per box	30 pieces
Modules per 40HQ container	900 pieces



Back

Contact support



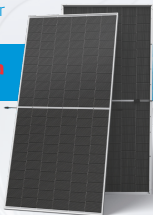
N-type i-TOPCon Ultra

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

TSM-NEG19RC,20 620-645W

645W / MAXIMUM POWER OUTPUT

23.9% / MAXIMUM EFFICIENCY



High customer value

- Best partner of 3P tracker, with highest utilization of tracker length
- Low voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 1%~5%
- Standardized module size with higher container space utilization effectively reduces the freight cost
- Excellent compatibility with existing mainstream systems components
- Certified Low-Carbon Footprint



High power up to 645W

- Up to 23.9% module efficiency, on Z10 innovation platform
- Patented i-TOPCon technology with continuous efficiency upgrade, including contact resistance reduction, rear reflection enhancement and edge quality refinement



High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, H₂O, LD, LiTIO
- Sustainable in harsh environments and extreme weather conditions



High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.29%/°C)
- Higher bifaciality, with up to 10%~20% additional power gain from back side depending on albedo
- Reliable dual-glass structure with 30-year power guarantee

Performance Warranty



Comprehensive Products and System Certificates

- IEC62254 IEC62730 IEC61703 IEC62716 IUL62730
- ISO 9001: Quality Management System
- ISO 14001: Environmental Management System
- ISO 14064: Greenhouse Gases Emissions Verification
- ISO 45001: Occupational Health and Safety Management System
- ISO 14067: Product Carbon Footprint Limited Assurance



Back

Technical Specifications

ELECTRICAL DATA (STC & NOCT & MPPT)

Testing Condition	STC	NOCT	BNP1	STC	NOCT	BNP1	STC	NOCT	BNP1	STC	NOCT	BNP1	STC	NOCT	BNP1			
Peak Power (Watts-Peak)(Wp)*	620	473	587	625	477	592	630	481	598	635	487	704	648	499	709	645	492	725
Power Selection (W) ^{**}	0 ~ 5																	
Maximum Power Voltage-Vm (V)	40.24	37.90	43.24	40.46	38.10	40.46	40.68	38.30	40.68	40.80	38.50	43.00	41.06	38.70	41.06	41.22	38.80	41.22
Maximum Power Current-Imp (A)	15.41	12.47	17.07	15.45	12.52	17.12	15.49	12.57	17.16	15.56	12.60	17.23	15.60	12.67	17.28	15.65	12.70	17.34
Open Circuit Voltage-Voc (V)	48.50	46.10	48.50	48.70	46.30	48.70	48.90	46.50	48.90	49.10	46.80	49.10	49.30	46.90	49.30	49.52	47.00	49.52
Short Circuit Current-Isc (A)	16.26	13.10	18.00	16.32	13.15	18.09	16.38	13.20	18.15	16.44	13.25	18.22	16.51	13.30	18.29	16.56	13.33	18.34
Module Efficiency _{STC} (%)	23.0			23.1			23.3			23.5			23.7			23.9		

STC: irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5, NOCT: irradiance of 800W/m², Ambient Temperature 30°C, Wind Speed 2m/s. BNP1: irradiance of 1000W/m², cell temperature 30°C, Air Mass 1.5. *Measuring tolerance: ±1%. **Power selection up to ±1%.

Electrical characteristics with different power bin (reference to 1% & 10% backside power gain)

Backside Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Peak Power (Watts-Peak)(Wp)	661	662	666	666	662	660	667	666	672	704	677	710	677	710
Maximum Power Voltage-Vm (V)	40.24	40.24	40.46	40.46	40.68	40.68	40.80	40.80	41.06	41.06	41.22	41.22	41.22	41.22
Maximum Power Current-Imp (A)	16.18	16.95	16.22	17.80	16.26	17.04	16.53	17.31	16.98	17.35	16.48	17.22	16.48	17.22
Open Circuit Voltage-Voc (V)	48.50	48.50	48.70	48.70	48.90	48.90	49.10	49.10	49.30	49.30	49.52	49.52	49.52	49.52
Short Circuit Current-Isc (A)	17.07	17.89	17.14	17.95	17.20	18.02	17.26	18.06	17.34	18.18	17.30	18.21	17.30	18.21

TEMPERATURE RATINGS

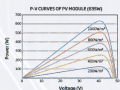
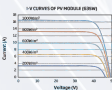
NOCT (Nominal Operating Temperature)	49°C (121°C)
Temperature Coefficient of Power	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	0.04%/°C

Due to different testing methods, the actual performance might differ from the declared open circuit.

MAXIMUM RATINGS

Operational Temperature	-40 ~ +85°C
Maximum System Voltage	1500V DC (BC)
Max Series Fuse Rating	35A

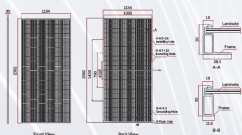
CURVES OF PV MODULE



MECHANICAL DATA

Solar Cells	H-type 52PCS Mono-crystalline
No. of cells	132 cells
Module Dimension	2282*1134*30 mm (89.9*44.6*1.18 inch)
Weight	5.62 kg per m ²
Front Glass	2.0 mm thick anti-reflective, AR Coating/Heat Strengthened Glass
Back Glass	2.0 mm thick anti-reflective, Heat Strengthened Glass with silver paste
Frame	30mmx1.2mmx1.2mm Aluminum Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable-A Grade copper wire with Polyethylene (PE) sheath and PVC jacket Length can be customized
Connector	MC4/MSD / T54 Plug / T54*
Packaging	Module per pallet: 36 pieces Module per 40HQ container: 700 pieces

*Please refer to regional distributor for specified connector.



Vertex N Trinasolar

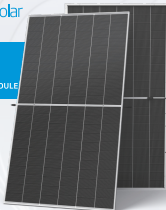
N-type i-TOPCon

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

TSM-NEG21C.20 700-725W

725W / MAXIMUM POWER OUTPUT

23.3% / MAXIMUM EFFICIENCY



High customer value

- Standardized module size with flagship module power, 30W higher compared with conventional technology
- Low voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 2%~5%
- Higher container space utilization effectively reduces the freight cost
- Certified Low-Carbon Footprint
- The Star of LCOE



High power up to 725W

- Up to 23.3% module efficiency, on 210 innovation platform
- Patented i-TOPCon technology with continuous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality improvement



High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, PDL, LD, LeTD
- Sustainable in harsh environments and extreme weather conditions



High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.29%/°C)
- Higher bifaciality, with up to 10%~20% additional power gain from back side depending on albedo
- Reliable dual-glass structure with 30-year power guarantee

Performance Warranty



Comprehensive Products and System Certificates

- ISO22540:62790/6051701/6052716
- ISO9001: Quality Management System
- ISO14001: Environmental Management System
- ISO14064: Greenhouse Gases Emissions Verification
- ISO45001: Occupational Health and Safety Management System
- ISO14067: Product Carbon Footprint Limited Assurance



Back

Technical Specifications

ELECTRICAL DATA (STC & NOCT @ 800W)

Testing Condition	STC	NOCT	BNP1	STC	NOCT	BNP1	STC	NOCT	BNP1	STC	NOCT	BNP1	STC	NOCT	BNP1
Peak Power (Watts)-P _{max} (W)*	700	594	776	705	540	761	710	548	767	715	547	762	720	551	798
Power Selection (W)**	0 ~ +5														
Maximum Power Voltage-V _{mp} (V)	46.5	38.0	43.5	46.7	36.3	40.7	40.5	36.5	40.0	41.3	36.7	42.1	41.3	36.0	43.3
Maximum Power Current-I _{mp} (A)	17.29	14.04	19.25	17.53	14.08	23.19	17.96	14.32	19.25	17.86	14.34	19.28	17.44	14.29	23.52
Open Circuit Voltage-V _{oc} (V)	48.6	46.1	49.6	48.8	46.3	48.8	49.0	46.5	49.0	49.2	46.7	49.2	48.6	46.9	49.6
Short Circuit Current-I _{sc} (A)	20.32	14.76	20.30	19.36	14.00	20.24	18.40	14.83	20.29	18.44	14.06	20.43	18.49	14.90	20.40
Module Efficiency(%)	22.5			22.7			22.9			23.0			23.2		

STC: irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5, NOCT: irradiance 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s, BNP1: irradiance from 200W/m² to 1000W/m², Cell Temperature 25°C
 *Measuring tolerance: ±3%, **Power selection: ±0.1%

Electrical characteristics with different power bin (reference to 0% & 10% back ratio power gain)

Back Ratio Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Peak Power (Watts)-P _{max} (W)	795	770	740	776	746	761	756	767	756	762	764	798	764	798
Maximum Power Voltage-V _{mp} (V)	43.5	43.5	40.7	40.7	40.9	40.9	41.1	41.3	41.3	41.3	41.5	41.5	41.5	41.5
Maximum Power Current-I _{mp} (A)	18.25	18.02	18.29	18.06	18.29	18.30	18.27	18.14	18.31	18.18	18.34	18.22	18.34	18.22
Open Circuit Voltage-V _{oc} (V)	49.6	49.6	48.8	48.8	49.0	49.0	49.2	49.2	49.4	49.4	49.6	49.6	49.6	49.6
Short Circuit Current-I _{sc} (A)	19.24	20.15	19.29	20.20	19.32	20.24	19.36	20.29	19.41	20.34	19.47	20.29	19.47	20.29

Power Efficiency: 90.1%

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (109°F)
Temperature Coefficient of P _{max}	-0.29%/°C
Temperature Coefficient of V _{oc}	-0.24%/°C
Temperature Coefficient of I _{sc}	0.04%/°C

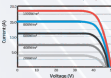
Note: In different testing methods, the actual parameters might differ from the declared specifications.

APPLICATION CONDITIONS

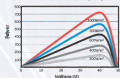
Operating Temperature	-40 ~ +70°C
Maximum System Voltage	1500V DC (EFC)
Max Series Fuse Rating	75A

CURVES OF PV MODULE

I-V CURVES OF PV MODULE (715W)



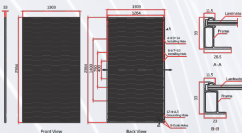
P-V CURVES OF PV MODULE (715W)



MECHANICAL DATA

Solar Cells	A-type 1 TOPCell Monocrystalline
No. of cells	132 cells
Module Dimensions	2084 ± 0.24mm (81.65 ± 0.01in) Lx1136 ± 0.25mm (44.73 ± 0.01in) Wx33 ± 0.13mm (1.30 ± 0.005in) H
Weight	36.5kg±0.4kg (80.5±0.9lb)
Front Glass	2.0mm±0.05mm, AR-Coating Heat Strengthened Glass
Back Glass	2.0mm±0.05mm, Heat Strengthened Glass anti-reflection
Frame	Fluoropolymer Anodized Aluminum Alloy
J-Box	IP68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² cross-section Nominal: 25A/250mm ² UL1004 rated Length can be customized
Connector	MC4 EVOL / 15A Plus / 15A*
Packaging	Modules per bin: 33pieces Modules per 400mmx1500mm: 594 pieces

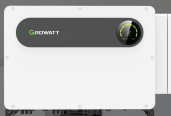
*Please refer to regional distributor for specific connector.



Back

Contact support





Inverter

Brand Selection:

 GROWATT



 solis



 SUNGROW



 HUAWEI



Back

Contact support



Inverter **G**ROWATT

Type Selection:



On Grid

Max 100 - 125KTL3-XLV >



Off Grid

SPF 6000 ES Plus >



Hybrid

WIT 4-15K-HU >



Back

Contact support



Datasheet	SPF 6000 ES Plus
Battery voltage	60VDC
Battery type	LiFePO ₄ /Lead-acid
Inverter output	
Rated power	4000VA/600W
Parallel capability	Yes, 4 units maximum
AC voltage regulation (battery mode)	230VAC ± 5% @ 50/60Hz
Surge power	13000VA
Efficiency (peak)	93%
Waveform	Pure sine wave
Transfer time	10ms typical, 20ms Max
Solar charger	
Maximum PV array power	8000W
MPPT range @ operating voltage	128VDC ~ 450VDC
Number of independent MPPT trackers/ strings per MPPT tracker	2/1
Max. input current per MPPT tracker	10A
Maximum PV array open circuit voltage	500VDC
Maximum solar charge current	100A
AC charger	
Charge current	80A
AC input voltage	230VAC
Selectable voltage range	130-280 VAC (For personal computers) ; 90-280 VAC (For home appliances)
Frequency range	50Hz/60Hz (Auto sensing)
Physical	
Protection degree	IP23
Dimension (W*H*D)	440/395*132mm
Net weight	13.5kg
Operating environment	
Humidity	0% to 95% Relative humidity (Non-condensing)
Altitude	+2000m
Operating temperature	0°C ~ 50°C
Storage temperature	-15°C ~ +60°C


Back
Contact support


Datasheet	WT 4K-HU	WT 5K-HU	WT 6K-HU	WT 8K-HU	WT 10K-HU	WT 12K-HU	WT 15K-HU
Input data (PV)							
Max. recommended PV power	6000W	8000W	9600W	12000W	14000W	18000W	24000W
MPPT voltage (V _{OC})				1800V			
Max. input voltage				180V			
Nominal voltage				400V			
MPPT voltage range				150V-850V			
Max. input current per MPPT sector		40A			20A		40A
Max. short-circuit current per MPPT sector		50A			25A		50A
No. of PV strings per MPPT sector		2			1		2/1
No. of MPPT sectors		1			2		2
Input/Output AC (including the Gen Port)							
AC input/output nominal power(Grid)	8000W/8000W	10000W/10000W	12000W/12000W	16000W/16000W	20000W/20000W	24000W/24000W	30000W/30000W
Max. AC input/output apparent power(Grid)	8800VA/8800VA	11000VA/11000VA	13200VA/13200VA	17600VA/17600VA	22000VA/22000VA	26400VA/26400VA	33000VA/33000VA
Max. input/output current(200V)	13.4A/13.4A	16.7A/16.4A	20.0A/19.0A	25.8A/13.3A	33.3A/16.7A	48.8A/20.8A	50.1A/25.0A
Max. input current@200V (couple)	12.2A	15.2A	18.2A	24.2A	30.4A	36.4A	45.4A
Max. continuous AC pass-through current				50.1A			
Nominal AC voltage/range				230V/230V, 220V/230V, *110V-120V			
Nominal AC grid frequency/range				50/60Hz, 49-50.5Hz/49-60 Hz			
Adjustable power factor				-1...+1			
THDi				<3%			
AC grid connection type				3P3W+PE/3P3W+PE			
Battery data (DC)							
Battery type				Lead-Acid or LiFePO4-ion			
Battery voltage range/Rated voltage				48V/51.2V			
Max charging and discharging current	118A	125A	138A	200A	228A	250A	290A
BMS communication				RS485/CAN			
Backup power (AC)*							
Rated AC output power	4800W	5000W	6800W	8800W	10000W	12800W	15800W
Max. AC apparent power				2 times of rated power, 15s			
Rated AC output voltage				230V/230V, 220V/230V			
Nominal AC output frequency				50/60Hz			
Max. output current	12.2A@220V 11.4A@230V	15.2A@220V 14.4A@230V	18.2A@220V 20.0A@230V	24.2A@220V 23.2A@230V	30.4A@220V 29A@230V	36.4A@220V 34.8A@230V	45.4A@220V 43.4A@230V
THDi				3% (three phase)			
Load unbalance				100% three-phase unbalanced			
DC/AC grid transfer time				15ms			
Efficiency							
Max. efficiency				97.65%			
European efficiency				97.00%			
MPPT efficiency				99.95%			
Protection devices							
PV reverse polarity protection				Yes			
DC switch				Yes			
DC/AC surge protection				Type I/Type II			
Insulation resistance monitoring				Yes			
Residual-current monitoring unit				Yes			
AC short-circuit protection				Yes			
Ground fault monitoring				Yes			
Grid monitoring				Yes			
Strings monitoring				Yes			
Anti-islanding protection				Yes			
IPD protection				Opt			
APF Function				Opt			
General							
Dimensions (W x H x D)				415x340x240mm			
Weight				43kg			
Operating temperature range				-30°C ~ +50°C, (-15°C, clearing)			
Noise				<60dB(A)			
Relative humidity				0-100%			
MTBF				30000h			
Topology				Transformerless			
Cooling				Smart air cooling			
IP degree				IP40			
Display				LED/LCD/MP			
Interfaces: RS485, CAN				Yes			
Interfaces: WPA, LAN				Yes			
Warranty (3+10 years)				Real-time			

WT 4K-HU, EC 41380, EC 41727, EC 42176, EC 41483, EC 40048, EN 50449, IEC 41381


Back
Contact support


Inverter solis

Type Selection:



On Grid

80 - 125K



On Grid

250 - 255K



On Grid

350K



Back

Contact support



Models	80K	100K	110K	125K	125K-HV
Input DC					
Max. input voltage	1100V				
Rated voltage	600V				120V
SOPT so voltage	390V				
MPPT voltage range	180-1300V				
Max. input current	4 × (42 A / 36 A)				5 × (42 A / 36 A)
Max. short circuit current	8 × 58 A				10 × 58 A
MPPT number / Max. input strings number	8 / 35				10 / 30
Output AC					
Rated output power	90 kW	100 kW	110 kW	125 kW	125 kW
Max. apparent output power	88 kVA	118 kVA	121 kVA	125 kVA	120.5 kVA
Max. output power	98 kW	110 kW	121 kW	115 kW	117.5 kW
Rated grid voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V				3/PE, 480 V
Rated grid frequency	50 Hz / 60 Hz				
Rated grid output current	121.6 A / 113.5 A	152.8 A / 143 A	181.1 A / 158.8 A	209.5 A / 200.4 A	150.4 A
Max. output current	133.7 A	167.1 A	183.8 A	209.5 A	185.4 A
Power factor	= 0.99 (0.8 leading - 0.8 lagging)				
THDi	= 3%				
Efficiency					
Max. efficiency	98.7%				
EU efficiency	98.8%				
Protection					
DC reverse polarity protection	Yes				
Short circuit protection	Yes				
Output over current protection	Yes				
Surge protection	DC Type II / AC Type II				
Grid monitoring	Yes				
Anti-islanding protection	Yes				
Temperature protection	Yes				
Strings monitoring	Yes				
IV Curve scanning	Yes				
Integrated MPD 2.0	Optional				
Integrated PID recovery	Optional				
Integrated DC switch	Yes				
Integrated AC switch	Optional				
General Data					
Dimensions (W × H × D)	1014 × 561 × 345 mm				
Weight	33 kg				36 kg
Topology	Transformerless				
Self-consumption (night)	+2 W				
Operating ambient temperature range	-30 ~ +40°C				
Relative humidity	0 ~ 100%				
Ingress protection	IP66				
Cooling concept	intelligent fan-cooling				
Max. operation altitude	4000 m				
Grid connection standard	GB, IEC61737, EN50549-1/2, VDE4118				
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 62109-6-2/-4				
Features					
DC connection	MC4 connector				
AC connection	CF terminal (max. 248 mm²)				
Display	LCD				
Communication	RS485, Optional: Wi-Fi, GPRS, PLC				


Back
Contact support


Models	250K	255K
Input DC		
Max. input voltage	250V	
Rated voltage	208V	
Start-up voltage	50V	
MPPV voltage range	480 - 1580V	
Max. input current	12 + 36A	
Max. short-circuit current	12 + 36A	
MPPV number / Max. input strings number	12 / 24	
Output AC		
Output power	250 kW@30°C / 120 kW@40°C / 220 kW@50°C	255 kW@30°C / 235 kW@40°C / 128 kW@50°C
Rated grid voltage	3/PE, 800 V	
Grid voltage range	840 - 920V	
Rated grid frequency	50 Hz / 60 Hz	
Max. output current	180/4A	204/0A
Power factor	+0.99 (0.8 leading - 0.8 lagging)	
THDi	< 3%	
Efficiency		
Max. efficiency	99.2%	
EU efficiency	98.8%	
Protection		
DC reverse polarity protection	Yes	
Short-circuit protection	Yes	
Output over current protection	Yes	
Surge protection	DC Type II / AC Type II	
Grid monitoring	Yes	
Anti-islanding protection	Yes	
Temperature protection	Yes	
Strings monitoring	Yes	
UV Curve scanning	Yes	
Night time SGI function	Yes	
Integrated PID recovery	Yes	
Integrated DC switch	Yes	
General Data		
Dimensions (H x W x D)	1125 x 770 x 304 mm	
Weight	113 kg	
Topology	Transformerless	
Self-consumption (night)	+2 W	
Operating ambient temperature range	-30 ~ +60°C	
Relative humidity	0 - 100%	
Ingress protection	IP66	
Cooling concept	Intelligent fan-cooling	
Max. operation altitude	4000 m	
Grid connection standard	EN50438, G99, IEC61712, VDE0126, IEC61717, VDE4130, CEA 2013	
Safety / EMC standard	IEC/EN 62109-1/-3, IEC/EN 62038 4-2/4	
Features		
DC connection	MC4 connector	
AC connection	CF terminal (max. 300 mm ²)	
Display	LCD	
Communication	RS485, Optional, PLC	


Back
Contact support


DATASHEET

Models	350K
Input DC	
Max. input voltage	250V
Rated voltage	250V
Start-up voltage	50V
MPPV voltage range	40 - 250V
Max. input current	6 + 30 A
Max. short circuit current	5 + 125 A
MPPV number / Max. input strings number	6 / 30
Output AC	
Rated output power	350 kW
Max. apparent output power	390 kVA
Rated grid voltage	570V, 800V
Grid voltage range	440 - 520 V
Rated grid frequency	50 Hz / 60 Hz
Max. output current	252.6 A
Power factor	+ 0.9 (0.8 leading - 0.9 lagging)
THD	< 3%
Efficiency	
Max. efficiency	99.8%
EU efficiency	98.7%
Protection	
DC reverse-polarity protection	Yes
Short circuit protection	Yes
Output over current protection	Yes
Surge protection	DC Type II / AC Type II
Grid monitoring	Yes
Anti-islanding protection	Yes
Temperature protection	Yes
Strings monitoring	Yes
UV Curve scanning	Yes
Night time SW function	Yes
Integrated PID recovery	Yes
Integrated DC switch	Yes
General Data	
Dimensions (W x H x D)	208 x 815 x 115.5 mm
Weight	117 kg
Topology	Transformerless
Self-consumption (night)	< 2 W
Operating ambient temperature range	-30 ~ +60°C
Relative humidity	0 - 100%
Ingress protection	IP66
Cooling concept	Intelligent fan-cooling
Max. operation altitude	4000 m
Grid connection standard	EN50461, EN-50471-2, VDE0126, IEC61721, VDE0430, CEA 2019
Safety / EMC standard	IEC61159-3-2, EN61800-6-21-4
Features	
DC connection	Matching connector
AC connection	DT terminal (max. 40 mm ²)
Display	LED indicator & Bluetooth + APP
Communication	RS485, Optional PLC


Back
Contact support


Inverter **SUNGROW**

Type Selection:



On Grid

SG125CX-P2



On Grid

SG150CX



Back

Contact support



SUNGROW

ON GRID

Type designation	SG125CX-P2
Input (DC)	
Recommended max. PV input power	175 kW
Max. PV input voltage	1100 V
Min. PV input voltage / Startup input voltage	100 V / 200 V
Rated PV input voltage	600 V
MPP voltage range	180 - 1000 V
No. of independent MPP inputs	12
No. of PV strings per MPP	2
Max. PV input current	340 A (30 A * 12)
Max. DC short-circuit current	480 A (40 A * 12)
Max. current for DC connector	20A
Output (AC)	
Max. AC Output power	125 kVA (415 V @ 50 °C) *
Rated AC output apparent power	125 kVA (415 V @ 50 °C) *
Max. AC output current	181.1 A
Rated AC output current(at 230V)	181.1 A
Rated AC voltage	3 / N / PE, 230 / 400 V; 3 / N / PE, 240 / 415 V
AC voltage range	320 - 480 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 - 55 Hz / 55 - 65 Hz
Harmonic (THD)	< 3 % (at rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading - 0.8 lagging
Feed-in phases / connection phases	3 / 3-N-PE
Efficiency	
Max. efficiency / European efficiency	96.5% / 96.3%
Protection	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Surge protection	DC Type I + II / AC Type II
Ground fault monitoring	Yes
DC switch	Yes
PV string monitoring	Yes
Q at night function	Yes
Arc fault circuit interrupter (AFCI)	Yes
RID recovery function	Yes
General Data	
Dimensions (W*H*D)	1020*730*360 mm
Mounting Method	Wall-mounting bracket
Weight	87 kg
Topology	Transformerless
Degree of protection	IP66
Corrosion	C5
Night power consumption	< 5 W
Operating ambient temperature range	-30 to 60 °C
Allowable relative humidity range (non-condensing)	0 - 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display	LED, Bluetooth+APP
Optimizer	SP6005 (Optional)
Communication	RS485 / Optional: WLAN, Ethernet
DC connection type	Exo2 (Max. 6 mm ²)
AC connection type	DT / DT terminal (Max. 240 mm ²)
Grid Compliance	IEC 62109-1, EN/IEC 61000-4-1/2/3/4, IEC 61727, IEC 62196, EN 50549-1/2, ITC 615-712-1, VDE V 0126-1-1, VDE-AR-N 4105:2018, VFR 2019, NC RFG, C59, UNE 217002, NTS, CEI 0-21 2019, CEI 0-16 2019, NRS-097-2-1
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control



Back

Contact support



SUNGROW

ON GRID

Type designation	SG90CX
Input (DC)	
Recommended max. PV input power	210 kWp
Max. PV input voltage ¹⁾	1000 V
Min. MV input voltage / startup input voltage	180 V / 200 V
Rated PV input voltage	600 V 380 V / 400 V / 415 V / 720 V / 480 V
MPPV voltage range ²⁾	80 V - 0 / 900 V
No. of independent MPP inputs	7
No. of PV strings per MPP	3 / 3 / 3 / 3 / 3 / 3
Max. PV input current	18A / (48 A * 3)
Max. DC short-circuit current	482 A / (66 A * 7)
Max. current for DC connector	30 A
Output (AC)	
Rated AC output power	150 kW
Max. AC output apparent power	165 kVA
Max. AC output current	250.7 A @ 380 Vac; 240.6 A @ 400 Vac / 415 Vac; 200.5 A @ 480 Vac
Rated AC output current	223.4 A @ 380 Vac; 216.5 A @ 400 Vac / 415 Vac; 180.6 A @ 480 Vac
Rated AC voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V, 240 V / 415 V, 277 V / 480 V
AC voltage range	120 V - 480 V / 380 V / 400 V / 415 V / 380 V - 582 V / 480 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz - 0 / 55 Hz / 55 Hz - 0 / 65 Hz
Harmonic (THD)	±1 % (at 400 V AC voltage and rated power) ±2 % (at 480 V AC voltage and rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.81 leading / 0.81 lagging
Feed-in phases / AC connection	3 / 3-N-PE
Efficiency	
Max. efficiency	96.8%
European efficiency	96.2% (390 V / 400 V / 415 V); 98.4 % (480 V)
Protection & function	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Surge protection	DC Type I+II / AC Type II
Ground fault monitoring	Yes
DC switch	Yes
PV string current monitoring	Yes
Intelligent DC arc interrupter	Yes
Arc fault circuit interrupter (AFCI)	Yes
RED recovery function	Yes
IPD compatibility ***	Optional
General data	
Dimensions (W * H * D)	825 mm * 798 mm * 360 mm
Weight	±100 kg
Mounting method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP66
Night power consumption	± 7 W
Corrosion	C5
Operating ambient temperature range	-30 °C - 60 °C
All possible relative humidity range (non-condensing)	0 - 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m
Display	LED, Bluetooth + APP
Communication	RS485 / WLAN (optional) / Ethernet (optional)
DC connection type	EVQ2 (Max. 6 mm)
AC connection type	OT / OT terminal (100-600 mm)
AC cable specification	Outside diameter 18 mm - 38 mm
Grid compliance	IEC EN 62109-1/2; IEC 60629; IEC 61000-6-1/2/3/4; IEC 61001; C-EMC; IEC 61003; EN 50549-1/2/3/4; IEC 61727; IEC 62176; IEC 61683; EN 50530; IEC 60069-1/2/14-20-30/64; IEC/EN 61000-5-1/12; IEC 62320; VDE4110; VDE4110; PSE 2018; NC RFG; TOR Grazeur Typ A; TOR Grazeur Typ B; DVC-Richtlinie RDS/03.20; D99; CEI 0-16; CEI 0-21; VDE0106; NTS UNE21700/01/002; NTS 630; IEC60947-2; IEC 61000-4; IEC 62380; DEWA; NRS 097; IEC-DCC; MV
Grid support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control



Back

Contact support



Inverter HUAWEI

Type Selection:



On Grid

SUN2000-115KTL-M2 >



On Grid

SUN2000-330KTL-H2 >



Back

Contact support



Technical Specification
SUN2002-115KTL-W2
Efficiency

Max. efficiency	97.5% (400 V), 96.9% (480 V)
European efficiency	96.4% (400 V), 96.5% (480 V)

Input

Max. Input Voltage	1,100 V
Max. Current per MPPT	30 A
Max. Current per input	30 A
Max. Short-Circuit Current per MPPT	40 A
Start Voltage	230 V
MPPT Operating Voltage Range	300 V ~ 1,000 V
Harmonic Input Voltage	480 V (480 Vac), 720 V (480 Vac)
Number of MPPT trackers	10
Max. Input Number per MPPT Tracker	2

Output

Harmonic AC Active Power	115,000 W
Max. AC Apparent Power	125,000 VA
Max. AC Active Power (single-1)	120,000 W
Harmonic Output Voltage	400 V (480 V), 720 V (480 V)
Rated AC Grid Frequency	50 Hz (60 Hz)
Harmonic Output Current	166.6 A (480 V), 151.4 A (480 V)
Max. Output Current	167.1 A (480 V), 151.4 A (480 V)
Adjustable Power Factor Range	0.8 leading ~ 0.8 lagging
Max. Total Harmonic Distortion	< 3%

Protection

Input-side Disconnection Device	Yes
Anti-Islanding Protection	Yes
AC Overcurrent Protection	Yes
DC Reverse-polarity Protection	Yes
PT Voltage String Fault Monitoring	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type I
DC Insulation Resistance Detection	Yes
Residual Current Monitoring (RCD)	Yes
Smart String Level Disconnect	Yes

Communication

Display	LED Indicators; WLAN adapter + External APP
RS485	Yes
USB	Yes
Smart Dongle (4G)	Smart Dongle + 4G / WLAN (Optional)
Monitoring Data (Modbus)	Yes (data on transformer required)

General Data

Dimensions (H x W x D)	1,000 x 600 x 360 mm
Weight (with mounting plate)	91 kg
Operating Temperature Range	-25°C ~ 60°C
Cooling Method	Smart Air Cooling
Max. Operating Wind Speed	4.00 m/s (11.11 ft/s)
Relative Humidity	0 ~ 100%
DC Connector	Impressed Helix HD
AC Connector	Waterproof Connector + 25.00" Terminal
Protection Degree	IP66
Topology	Three-inverting
High-Driver Power Consumption	< 1.5 W

Standard Compliance (more available upon request)

CE mark	EN 61683-1/-2, EN 61683-1/-2, EN 61683-3, EN 61683-3, EN 61683-3, EN 61683-3, EN 61683-3, EN 61683-3
VDE mark (with VDE approval)	VDE 0110-101, VDE 0110-102, VDE 0110-103, VDE 0110-104, VDE 0110-105, VDE 0110-106, VDE 0110-107


Back
Contact support


Efficiency

Max. Efficiency	≥ 99.0%
European Efficiency	≥ 98.8%

Input

Max. Input Voltage	1,500 V
Number of MPPT	6
Max. Current per MPPT	65 A
Max. Short Circuit Current per MPPT	115 A
Max. PV Inputs per MPPT	4/5/5/4/5/5
Start Voltage	550 V
MPPT Operating Voltage Range	500 V ~ 1,500 V
Nominal Input Voltage	1,080 V

Output

Nominal AC Active Power	275,000 W
Max. AC Apparent Power	330,000 VA
Max. AC Active Power (cosφ=1)	330,000 W
Nominal Output Voltage	800 V, 3W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	198.5 A
Max. Output Current	240.3 A
Adjustable Power Factor Range	0.8 LG ... 0.8 LD
Total Harmonic Distortion	THD _L < 1% (Rated)

Protection

Smart String-level Disconnection (SSLD)	Yes
Smart Connector-level Detection (SCLD)	Yes
AC Dencurrent Protection	Yes
DC Reverse-polarity Protection	Yes
PV-array String Fault Detection	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
DC Insulation Resistance Detection	Yes
Residual Current Detection Unit	Yes

ommunication

Display	LED Indicators, WLAN + APP
USB	Yes
MBUS	Yes
RS485	Yes

General

Dimensions (W x H x D)	1,040 x 752 x 395 mm
Weight (with mounting plate)	≤ 112 kg
Operating Temperature Range	-25°C ~ 60°C
Cooling Method	Smart Air Cooling
Max. Operating Altitude without Derating	4,900 m
Relative Humidity	0 ~ 100% (Non-condensing)
DC Connector	HH45MM4TMSPA / HH45PM4TMSPA
AC Connector	Support DT / DT Terminal (Max. 400 mm ²)
Protection Degree	IP 66
Anti-corrosion Protection	C5-Medium
Topology	Transformerless

Standards Compliance

IEC 62109-1/-2, IEC 62520, IEC 60947-2, EN 50549-2, IEC 61683, etc.


Back
Contact support




LFP Battery

Brand Selection:

 GROWATT



 DYNES



Back

Contact support



GROWATT

LFP Batter

Type Selection:



HOPE 5.0L-B1



HOPE 5.0LW-B1



HOPE 16.0LM-A1



Back

Contact support





Datasheet	Hope 5.0L-B1
Battery data	
Nominal voltage	51.2V
Rated capacity	5.12kWh
Usable capacity	5.0kWh
Operating voltage	40 – 58.4V
Max. discharging current	180A
Peak discharging current	258A/150ms
Max charging current	180A
General data	
Dimension (W/D/H)	440/480/138.5mm
Weight	43±2kg
IP protection	IP30
Charge temperature	0°C~+55°C
Discharge temperature	-20°C~+55°C
Features	
DOD	98%
Cycle life	>6000 (25°C, 0.3C)
Fast-charge connection	Max.48 packs
Communication port	CAN/RS485
Warranty	5 Years

CE,EMC, UN 38.3, MSD, RoHS

*Nominal charge/discharge current and power density will occur related to Temperature and SOC



Back

Contact support



GROWATT

Datasheet	HOPE 5.0LW-B1
Battery data	
Nominal voltage	51.2V
Rated capacity	5.12kWh
Usable capacity	5.0kWh
Operating voltage	40 ~ 58.4V
Max. discharging current	100A
Peak discharging current	750A/5ms
Max charging current	100A
General data	
Dimension (WxDxH)	380x162x420
Weight	<14.5kg
IP protection	IP20
Charge temperature	0°C~+55°C
Discharge temperature	-20~+55°C
Installation	Wall-mounted
Features	
DOD	92%
Cycle life	>=4000 (80% DOD, 25°C)
Parallel connection	Max.48 packs
Communication port	CAN/RS485
Warranty	5 Years
EOD21FYC2EMQJAU06.3.M505/R010	



Back

Contact support





Datasheet		HOPE 16.0LM-A1
System data		
Battery type		LiFePO4
Nominal voltage		51.2V
Nominal capacity		160Ah
Usable capacity		15.36Ah
Operating voltage		40-58.4V
Max. Charge/Discharge current		118A/200A
Peak charging/discharging current		700A/200 us
DCB		Yes
General		
Dimension(W*H*D)		440*194*205mm
Weight		120x120g
Installation		Top-standing
Altitude		$+3000\text{m}$
IP Protection		IP20
Operating temperature		Chg: 0-45°C; Dis: -20-45°C
Storage temperature*		-20-45°C
Features		
Cycle life		4800@5C, 3000@0C, @25°C
Cooling		Natural convection
System connection		Max. 40 pins in parallel
Communication port		CAN/RS485
Warranty: System / 10 years		Yes / Optional
DISMCO, UNBMS, M20, RS-485, BMS/MPPT		



Back

Contact support



DYNES

LFP Battery

Type Selection:



DL5.0C PRO



POWERBRICK 14.3



Back

Contact support



DYNES

Model	DLS0C Pro
Battery Type	LiFePO ₄
Nominal Battery Energy	512kWh
Nominal Capacity	100Ah
Nominal Voltage	512V
Operating Voltage	44.8-516V
Recommended Charge & Discharge C Rate	0.5C
Maximum Discharge C Rate	1C
Recommended Charge/Discharge Current	50A
Max. Charge/Discharge Current	Charge 75A, Discharge 100A
Peak Discharge Current	100A@10min
Depth of Discharge (DOD)	95%
Net Weight	48kg
Dimension (W/D/H)	480/165/150mm
Charging Temp. Range	0-55°C/10-55°C (with heating function)
Discharging Temp. Range	-20-55°C
Communication	CAN/RS485
WH Module	Built-in WH module, APP OTA function
Cycle Life*	>6000 Cycles
Protection Level	IP20
Active fire protection system	Optional Aerosol fire extinguisher
Expansion	Up to 50 units in parallel
Plus	Can be used in both off-grid and hybrid setups, compact design
Certification & Safety Standard	UN38.3/CE-EMC/IEC60947-4-1/IEC60947-5-1
Compatible Inverters	SMA/SolarEdge/Victron energy/Epson/Bluebird/Goodwe/ Grower/Solarman/Solaxpower/DEHN/Alpsystem etc.



Back

Contact support



DYNES

Model	PowerBrick
Battery Type	LiFePO ₄
Nominal Battery Energy	14.33kWh
Nominal Voltage/Capacity	51.2V/280Ah
Recommended Charge/Discharge Current	140A (0.5C)
Max. Charge Current	200A
Max. Discharge Current	200A
Depth of Discharge	85%
Communication	CAN/RS485
Cycle Life *	Unlimited cycles / 10 Years
Protection Level	IP20
Net Weight	114kg
Dimension(WxHxL)	435/335/657mm (No wall-mounted bracket)
Maximum Parallel Modules	50
Charging Temp. Range	0-55°C
Discharging Temp. Range	-20-95°C
WiFi Module	Built-in WiFi module, APP OTA function
Fire Protection System	Optional Aerosol fire extinguisher
Certification & Safety Standard	UN38.3/CE-DAC/IEC62038/GOST-R
Compatible Inverters	SMA/Schneider/Watson energy/Hydrofarm/Sola/GoodWe/Growatt/Solarplus/COFAR/SAI/DEYE, etc.



Back

Contact support



Soiling Loss Measurement



NT-SMC01

[View Specifications](#)



[Back](#)

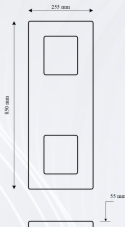
[Contact support](#)



- A precision instrument for measuring performance loss in solar panels caused by dust and pollution
- Locally designed with the ability to compare clean and polluted reference panels
- Equipped with self-cleaning reference cell, Wi-Fi and RS-485 connectivity
- Fast installation and stable operation in solar power plants

SPECIFICATIONS

Soiling Measurements	<ul style="list-style-type: none"> • Daily soiling loss (% of daily insolation loss) • Soiling rate (moving average, % loss/day) • Soiling ratio (IEC standard 61724-1) • Transmission loss (% instantaneous)
Irradiance	0 - 2000 W/m ² , ±0.5%, temperature correction
Power and Battery	Solar powered, 3000 mAh extended temperature Lithium-Ion chemistry
Data Connection	Modbus RTU (over RS-485)
Data Retrieval	WiFi (Password Protected), Modbus (Micro SD Archiving Available for 10 Years)
Reference Cell	Polycrystalline cell, solar glass with standard ARC coating, white backsheet, EVA encapsulant
Self-Calibration	Easy 1x / year, on-site, OTA or local Modbus. No off-site lab calibration required.
Mechanical Load Rating	+/- 2400 Pa for wind +5400 Pa for snow loading
Enclosure IP Rating	IP66
Cleaning System	1x SS spray nozzles, 60psi max, 100 Ltr. reservoir with pump available (Wash Extension accessory)
Mounting Holes	(6) 1/4"-20 brass inserts
Dimensions	850 x 255 x 55 mm (L x H x D)
Weight	15 kg
Electronic Temp. Range	-20°C to +75°C
Warranty	3 Years
Accessories	<ul style="list-style-type: none"> • Wash Extension with Tank Level Sensor • Purlin Bracket Kit



- Preventing up to 40% efficiency loss in panels due to pollution
- Increasing economic lifespan and reducing panel surface erosion through optimized cleaning intervals
- Smart maintenance management for solar power plants by recording and analyzing production data
- Suitable for industrial, megawatt-scale, and research projects
- Accurate, reliable, and consistent performance compliant with IEC724-1 standard

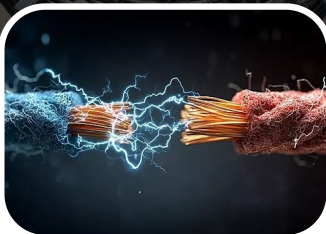


Back

Contact support



DC Cable



JINQISOLAR

[View Specifications](#)



[Back](#)

[Contact support](#)



Cable

JINQISOLAR

Type Selection:



JINQISOLAR 1x4mm² >



JINQISOLAR 1x6mm² >



Back

Contact support



IEC 62930 1x4.0 mm² DC 1500V XLPO/XLPO

Conductor	Stranded tinned copper (IEC 60228 Class 5) 56/0.28mm (min)0.27mm (max)0.28mm
Stranded OD	2.46 mm
Insulation	Halogen free crosslinked polyolefin Color: black
ID	4.0±0.15mm
Sheath	Halogen free crosslinked polyolefin Color: black/Red
OD	5.7±0.2mm
Marking	TÜV SÜD IEC62930 62930 IEC 131 1x4mm ² DC1500V HALOGEN FREE LOW SMOKE JINGJI SOLAR PTE. LTD. B 132888

1x4.0 mm² SOLAR DC CABLE

Maximum resistance of conductor at 20°C	≤5.8Ω/KM
Insulation resistance at 20°C	≥700 MΩ·Km
Insulation resistance at 90°C	≥0.700MΩ·Km
Voltage test of finished cable	AC 6.5KV 5min, No break
DC Voltage test of insulation	1800V, 240h (85°C, 10g/LNaCl) No break
Tensile strength of insulation	≥8Mpa
Elongation of insulation	≥125%
Tensile strength of sheath	≥8Mpa
Elongation of sheath	≥125%
Shrinkage resistant	≤2%
Acid and alkali resistant	IEC60811-404
Ozone resistant	IEC60811-403/EN60396-8.1.3
UV resistant	IEC 62930-Annex E
Dynamic penetrate force	IEC 62930-Annex D
-40°C, 16h) Winding at low temperature	IEC 60811-504
-40°C, 16h) Impact at low temperature	IEC 60811-506
Fire performance	IEC60332-1-2
Clad Br Content	IEC 62930
Thermal endurance Test	IEC 60216-1, IEC 60216-2, T1120

Halogen Free Cable For Photovoltaic Equipment

Solar Application

Rating voltage	IEC-DC1500V
Working temperature	40~90°C
Max. conductor temperature	120°C
Short circuit temperature	250°C @ 6S
Bending radius	6xD
Life Period	≥25 years

Current Rating Ambient Temperature: 30°C

Installation Method	Free in air	On surface without opposite contact	On surface without opposite contact
Current rating	57A	54A	45A



Back

Contact support



IEC 62930 1x6.0 mm² DC 1500V XLPO/XLPO

Conductor	Stranded tinned copper (IEC 60228 Class 5) 84/0.25mm (nix6.27mm max0.25mm)
Stranded OD	2.95 mm
Insulation	Halogen free crosslinked polyolefin Color: Black
ID	4.6±0.15mm
Sheath	Halogen free crosslinked polyolefin Color: Black/Red
OD	6.3±0.2mm
Marking	TÜV SÜD IEC62930 62930 IEC 131 1x6mm ² DC1500V HALOGEN FREE LOW SMOKE JNGC SOLAR PTE. LTD. B 132886

1x6.0 mm² SOLAR DC CABLE

Maximum resistance of conductor at 20°C	≤3.28Ω/KM
Insulation resistance at 20°C	≥810 MΩ·Km
Insulation resistance at 90°C	≥0.810 MΩ·Km
Voltage test of finished cable	AC 6.5KV 5min, No break
DC voltage test of insulation	1500V, 240h (95°C, 10g/LNaCl) No break
Tensile strength of insulation	≥8Mpa
elongation of insulation	≥125%
Tensile strength of sheath	≥8Mpa
elongation of sheath	≥125%
Shrinkage resistant	≤2%
Acid and alkali resistant	IEC60811-404
Ozone resistant	IEC60811-403/EN60994-4.1.3
UV resistant	IEC 62930-Annex E
Dynamic penetrate force	IEC 62930-Annex D
-40°C, 16h) Winding at low temperature	IEC 60811-554
-40°C, 16h) Impact at low temperature	IEC 60811-556
Fire performance	IEC60332-1-2
Cland Br Content	IEC 62930
Thermal endurance Test	IEC 60216-1, IEC 60216-2, TH30

Halogen Free Cable For Photovoltaic Equipment

Solar Application

Rating voltage	IEC -DC1500V
Working temperature	-40~90°C
Max. conductor temperature	120°C
Short circuit temperature	250°C @ 5S
Bending radius	6xD
Life Period	≥25 years

Current Rating Ambient Temperature: 30°C

Installation Method	Free in air	On surface without opposite contact	On surface without opposite contact
Current rating	75A	69A	59A

Approval: IEC62930



Back

Contact support



Connector



Trinasolar

[View Specifications](#)



[Back](#)

[Contact support](#)



TS4 Plus Connector Specifications

Product Name	TS4 Plus
Certified name	TS4-cd (c=1; d=1 or 2)
Rated voltage	IEC 1500V&UL 1500V
Rated current @IEC (85°C)	41A (4.0mm ² / 12AWG) 46A (6.0mm ² / 10AWG)
Rated impulse voltage	16KV
Ambient temperature range	-40°C~+85°C
Contact resistance	≤0.5mΩ
Application degree	Class A
Protection class	Class II
Pollution degree	2
Degree of protection	IP68 (1m, 1h)mated IP2X unmated
Flame class	UL94-V0
Insulation material	m-PPE/PA
Contact material	Copper, Tin-plated
Type of termination	Crimping
Locking system(UL)	Locking type
TUV,IEC62852	R50508240/R50385924
UL,UL6703	E486009

Product Selection Form

Type	P/N	Cable OD	Conductor Cross Section		Tool P/N		
			mm ²	AWG	Wire Stripper P/N	Rivet Plier P/N	Spanner P/N
TS4 Plus-F1	7A004669	4.7-6.0	4.0/6.0	12/10	7A001039	7A001038	7A004541
TS4 Plus-M1	7A004670						
TS4 Plus-F2	7A004671	5.6-6.8	4.0/6.0	12/10	7A001039	7A001038	7A004541
TS4 Plus-M2	7A004672						
TS4 Plus-F3	7A004673	6.0-7.2	4.0/6.0	12/10	7A001039	7A001038	7A004541
TS4 Plus-M3	7A004674						



Back

Contact support



Structure



FIXED BRACKET

[View Specifications](#)



[Back](#)

[Contact support](#)





Easy Adjustment

- **Push-Rod Operation - Quick Locking.** Ground push-rod operation allows fast adjustment and reliable locking.



Stable Structure

- **Triangular Locking - Superior Wind Resistance.** Triangular stable structure provides wind resistance comparable to fixed mounts.



Reliable Locking

- **Pin Fastening - No Loosening Risk.** Mechanical pin locking ensures no loosening.



Easy Operation & Maintenance

- **Durable - Low Maintenance.** Simple and durable design reduces O&M costs.

System Parameters

Tracking Type	2X14
Tilt Adjustment Range	15°-50°
Drive Type / Quantity	4 Push Rods
Protection Strategy	E-W: 5° (max); N-S: Unrestricted
Foundation Options	PHC pile
Structural Materials	Hot dipped galvanized/ZAM high-strength steel
Design Wind Load	0.42KN/m ² 25years
Design Snow Load	0.46KN/m ² 25years
Module Compatibility	Compatible with all types of module



Back

Contact support



MV Station solis

Model Selection:



Solis-6500-MV >



Solis-4550-MV >



Solis-9100-MV >



Back

Contact support



DATASHEET
Solis-6500-MV

Models	Solis-6500-MV
17 panel	
MCCB specification	400 A / 800 Vac / 30" 10 + 2 pcs
ACB specification	3200 A / 800 Vac / 30" 1 + 2 pcs
Connection form with transformer	Copper busbar
Transformer	
Transformer type	Oil immersed
Rated output power	4000 kVA @ 40°C
Max. output power	7000 kVA @ 30°C
220V voltage	24.9V / 10 - 30.9V
Max. input current	2526 A x 2
Tapping on HV	±2 + 2.5%
Vector group	Dy11y11
Frequency	50 Hz / 60 Hz
Cooling type	ONAN
Impedance	8% (x 10%)
Oil type	Mineral oil (Optional: plant oil)
Winding material	Al / Al (Optional: Cu / Cu)
Insulation class	A
Connection form with MV switchgear	Cable
MV switchgear	
Type of insulate	SF ₆ (Optional: SF ₆ -Free)
Rated voltage	12 - 40.5 kV
Rated current	400A
Internal arcing fault	20 kA / 1 s
Qty of feeder	3 feeders
Protection	
DF surge protection	AC type1 + 2
AC input protection	Circuit breaker
Transformer protection	Oil temperature, oil level, oil pressure
Fire protection	Smoke detection, emergency lighting
General data	
Dimensions (W x H x D)	6058 x 2096 x 2438 mm
Approximate weight	21 T
Operating ambient temperature range	-25 - +40°C
Max. operation altitude	2000 m
Auxiliary power supply	5 kVA / 230 V (Optional: max. 10 kVA)
UPS	1 kVA 30 min (Optional: max. 2 kVA 2h)
Degree of protection	IP54
Anti-corrosion Class	C4-H (Optional: C5-M)
Allowable relative humidity range	0 - 95%
Communication	RS485, Ethernet, Optical fiber
Compliance	IEC 60271, IEC 62271, IEC61851


Back
Contact support


DATASHEET
Solis-4550-MV

Models	Solis-4550-MV
LV panel	
MCCB specification	400A / 100Isec / 3P, 34 pcs
RCB specification	4000A / 180Isec / 3P, 1 pcs
Connection form with transformer	Copper busbar
Transformer	
Transformer type	Oil immersed
Rated output power	4550 kVA @ 40°C
Max. output power	4900 kVA @ 30°C
DMV voltage	0.8 kV / 38 - 35 kV
Max. input current	350kA
Tapping on MV	12 x 2.5%
Rectifier group	Dy11
Frequency	50 Hz / 60 Hz
Cooling type	ONAN
Impedance	9% (x 0.5%)
Oil type	Mineral oil (Optional plant oil)
Winding material	Al / Al (Optional: Cu / Cu)
Insulation class	A
Connection form with MV switchgear	Cable
MV switchgear	
Type of insulate	SF6 (Optional: SF6-Free)
Rated voltage	12 - 48.5 kV
Rated current	630 A
Internal arcing fault	20 kA / 1 s
Qty of breaker	3 breakers
Protection	
LV surge protection	AC type1 + II
RC input protection	Circuit breaker
Transformer protection	Oil temperature, oil level, oil pressure
Fire protection	Smoke detection, emergency lighting
General Data	
Dimensions (W*H*D)	800 x 2800 x 2400 mm
Approximate weight	35.6 T
Operating ambient temperature range	-25 - 40°C
Max. operation altitude	2000m
Auxiliary power supply	5 kVA / 220 V (Optional: max. 50 kVA)
UPS	1.6MkWh (Optional: max. 2.5MkWh)
Degree of protection	IP54
Anti-corrosion Class	C4-M (Optional: C5-M)
Allowable relative humidity range	5 - 95%
Communication	RS485, Ethernet, Optical fiber
Compliance	IEC 60076, IEC 62271, IEC 61439


Back
Contact support


DATASHEET
Solis-9100-MV

Models	Solis-9100-MV
CR panel	
HCC specification	400 A / 380 V ac / 3P, 3L + 2 pcs
ADB specification	4000 A / 800 Vac / 3P, 1L + 2 pcs
Connection form with transformer	Copper busbar
Transformer	
Transformer type	Oil immersed
Rated output power	3300 kW @ 40°C
Max. output power	8800 kW @ 30°C
LV / MV voltage	0.69 kV / 10 - 35 kV
Max. input current	3500 A + 2
Tapping on MV	±2 + 2.5%
Vector group	Dy11y0
Frequency	50 Hz / 60 Hz
Cooling type	ONAN
Impedance	9.5% (±0.2%)
Oil type	Mineral oil (Optional plant oil)
Winding material	Al / Al (Optional: Cu / Cu)
Insulation class	F
Connection form with MV switchgear	Cable
MB bus/chassis	
Type of insulator	SF6 (Optional: SF6-Free)
Rated voltage	12 - 48.5 kV
Rated current	630 kA
Internal arcing level	20 kA / 1 s
Qty of feeder	2 feeders
Protection	
UV surge protection	AC type I + II
AC input protection	Circuit breaker
Transformer protection	Oil temperature, oil level, oil pressure
Fire protection	Smoke detector, emergency lighting
General Data	
Dimensions (W x H x D)	4000 x 2800 x 2400 mm
Approximate weight	23.5 T
Operating ambient temperature range	-25 ~ +60°C
Max. operation altitude	2000 m
Auxiliary power supply	5 kW / 230 V (Optional: max. 50 kW)
UPS	1 kW / 30 min (Optional: max. 2 kW / 2h)
Degree of protection	IP54
Atmosphere Class	C4-H (Optional: C4-M)
Allowable relative humidity range	0 - 95%
Communication	RS485, Ethernet, Optical fiber
Compliance	IEC 60818, IEC 62211, IEC 61439


Back
Contact support




Head Office: No. 308, Dolat Street, Paramis Building, Units 203,304,604 Tehran, Iran

R&D Office: University of Science and Technology, Shahid Maleklou Street, Shahid Heydarkhani Street, Narmak, Tehran, Iran



Head Office: **021-21000477**

R&D Office: **021-73225613**



Info@noura-tech.com

| Inquiry and purchase order |



Back